

Houston South Vegetation Management and Restoration Project: Public Comments and Responses from 30-Day Comment Period

Comment No.	Name/Date Received	Summary	Forest Response
1 (PR bb15)	Larry Anthony 8/5/2019	Please send 2 copies of the proposed burn area and 2 copies of the hydrology maps and watershed/road maps.	Maps sent
2 (PR bb17)	Donald & Sandra Cox 8/5/2019	Would like to maintain access to National Forest using CR 625 N between CR 1250 West and the forest boundary north of our property.	Comment noted
3 (PR bb19)	Bobbie Harden 8/5/2019	Request a copy of the Environmental Assessment and Veg Specialist Report; would like a 8 ft off sides of trails (off them) to log away for riding	Documents sent; comment noted
4 (PR bb23)	Dave Simcox 8/5/2019	Evidence of science research for impact of fire/burning on NNIS siltgrass	Comment noted
5 (PR bb24)	Phyllis Whittredge 8/5/2019	Logging trails	Comment noted
6 (PR bb05)	Ken Day 8/6/2019	I want to congratulate you and the interdisciplinary team on an excellent job of analyzing the Houston South project. The analysis was thorough; including integrating response to scoping comments and analyzing effects. I am glad to see you implementing the Forest Plan. The Hoosier and other national forests throughout the nation are managed too lightly on the land.	Thank you
6-2	Ken Day 8/6/2019	I reviewed the 119 page response to comments. I found an excellent and gracious response throughout. I am amazed (I should not be) at the comments from public officials and longtime project commenters that they lack understanding of scoping. They behaved as if the scoping for issues was an analysis.	Thank you
6-3	Ken Day 8/6/2019	Thank you for addressing my comments in the EA. Your response sets the context and illustrates how conservative this project really is on the landscape. In reviewing the EA I found an excellent use of scientific literature to support your statements.	Thank you
6-4	Ken Day 8/6/2019	I support the regeneration cuts which will supply key habitat for early successional wildlife species. These species are in short supply on the Hoosier due to the	Thank you for your support and comment noted.

		lack of timber harvesting. The amount of regeneration harvesting should be greater but I understand the trade-offs.	
6-5	Ken Day 8/6/2019	To clarify some silvicultural terminology thinning is an intermediate cutting treatment and clear cutting and shelterwood are regeneration cutting methods in even-aged management. Unevenaged management includes selection and patch cutting. The discussion on these methods is not a clearly written and it could be. The public tends to be confused about this terminology which complicates communication. However, the presentation does not affect the decision to move ahead with managing this area of the Hoosier.	We have clarified this in the Final EA on pages 11 and 12.
6-6	Ken Day 8/6/2019	This is an excellent project and I am excited to see you move ahead with implementation. I wish you the best of luck as this project moves forward.	Thank you for your support
7 (PR bb16)	Mary Bookwalter 8/7/2019	Carbon sequestration information. Supposedly, newer scientific studies do indicate older forests and trees sequester more carbon than logged, burned, and heavily managed forests. Northern Research Station has put out such research as well	We have used the most current scientific data available to analyze carbon sequestration. A complete and quantitative assessment of forest carbon stocks and the factors that have influenced carbon trends for the Hoosier National Forest is available in the project record (Dugan et al. 2019) and on the project's website at: https://www.fs.usda.gov/project/?project=55119
7-2	Mary Bookwalter 8/7/2019	Timber management scheme: disagree with cost benefit of continued revisits/timber stand improvement, kill of "undesirable species" such as beech? Is this a timber factory farm for oaks? Not only is 1/3 of standing too aggressive, so this stand improvement burning chemical application, could also be relatively decreased, if the cut were 1/4 or less.	Comment noted. Timber management and stand improvements are analyzed in the silviculture specialist report and noted in the final EA.
7-3	Mary Bookwalter 8/7/2019	Look forward to a more thoughtful treatment of the water quality of Salt Creek. Hydrology map and already heavy agricultural runoff both suspended solids and farm field nutrients are supposed. Apparently is no currently conducted or planned water quality study of the upper reaches of Salt Creek before and after the logging.	Forest plan BMP's and disturbance thresholds all have been written based on historical research done throughout the country and government regulations. The Hoosier follows these guidelines to ensure we are compliant. It is not economically viable to conduct research studies for every project. There has been a study (Pate Hollow) done in the past near Lake Monroe with similar soil types and terrain which showed no significant impacts to the watershed from harvesting utilizing BMP's and mitigation methods. The HNF does

			welcome reputable partners to collaborate on research as needed when funding is available. Stream and soil disturbance monitoring is currently being done for pre and post-harvest activity.
7-4	Mary Bookwalter 8/7/2019	Otherwise, this proposal in no way increases or botlers (sic) any deep forest species except deer and ticks because it utterly changes deep forest. Wildlife habitat is not improved.	Comment noted.
8	Ron Eid 8/7/2019 (PR bb19)	<p>What measures will be taken for soil and sediment control of this project?</p> <p>How much of the logging is for commercial purposes?</p> <p>How much of the logging will be done by commercial interests?</p> <p>How will pesticides and herbicides be prevented from flowing into the lake (either water or airborne)?</p> <p>Which treatments (e.g. logging, burning) will be used to promote habitat for game birds, such as grouse?</p> <p>Has HNF consulted with various groups w/r/t this project?</p> <p>Which ones (eg. Hiking, hunting, logging groups)?</p> <p>How many hikers use the HNF annually?</p> <p>How many hunters use the HNF annually?</p> <p>How many loggers use the HNF annually?</p>	<p>The Environmental Assessment contains the answers to many of these questions in the following sections: Need for Action (pp. 7 - 8), Public Involvement and Tribal Consultation (p. 10), Proposed Action (pp. 10 - 14), Environmental Effects (pp. 14 - 71), and Agencies or Persons Consulted (p. 71).</p> <p>We have strived to make people aware of this proposal. A presentation was given at a public meeting in Bedford in September 2018 discussing the early stages of this proposal. The Forest Supervisor delivered another presentation on the proposal and took questions at the Monroe Co. public library in October 2018. The scoping letter was posted on our website and social media, press releases were sent to multiple papers more than 200 hardcopy letters were mailed and over 80 emails were sent out with the scoping letter attached to neighboring landowners and groups of varied interests.</p> <p>Visitor use statistics can be found at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd658366.pdf</p>
9	Robert Marr 8/7/2019 (PR bb20)	We are very concerned about the potential erosion runoff. Salt Creek is a watershed source for Lake Monroe and sediment buildup is a severe long term problem which could be exacerbated by this project. The importance of Lake Monroe to Bloomington's long term survival must not be underestimated. Please be overly cautious in your erosion control plan and techniques.	Thank you for your comments. Please see the final Environmental Assessment and the analysis on erosion control and watershed health.
9-2	Robert Marr 8/7/2019	The plan to "thin out" approx. 1/3 of the trees in certain areas seems very aggressive. Not leaving any beach	Many locations in the project area have site characteristics that favor beech and maple. The

		or maple is not giving consideration to the variety of wildlife species that depend to the species for habitat.	regeneration of oaks or hickories would not be attempted at those sites.
9-3	Robert Marr 8/7/2019	The forest belongs to all of us, so please be careful.	Comment noted.
10	Chris Neggers 8/7/2019 (PR bb21)	Reduction of horseback riders in the project area should be undertaken. The impact of horses on trails increases erosion, they spread invasive species, and are not a natural part of the landscape.	Comment noted.
10-2	Chris Neggers 8/7/2019	I strongly support the management of forests in this project area which will create young forest habitat, increase oak/hickory regeneration, and reduce the presence of non-native pine species. I would like to see this work begin as soon as possible.	Thank you for your support.
11	Andrey Sichuge 8/7/2019 (PR bb22)	If there is any harvesting/remediation taking place, it must be done with honor, integrity and love guiding the blade. Purely short-term scientific observations making claims of what tree species should exist does not suffice (ie oak dominance).	Comment noted.
11-2	Andrey Sichuge 8/7/2019	There needs to be immediate soil fertility, using easy cost effective phytoremediation methods, mycelium inoculation (Paul Stamens), dumping of rich topsoil and leaving fallen cut trees to develop into soil naturally.	Comment noted.
11-3	Andrey Sichuge 8/7/2019	Nonetheless, this proposed cutting is too harsh of an action even though it is said to be over time. It is 2019, we need to put in all resources for biodiversity and soil fertility for the other half of the state as well.	Comment noted.
12	Jeff Stant 8/7/2019 (PR bb26)	Please send me the federal guide(s) and directives that prescribed burning will attempt to follow for Houston South Project.	Links for the information sent via email on 8/13/19
13	Tim Maloney 8/7/2019 (PR bb28)	Request for a map of land suitability classes in Houston South	In response to your recent request regarding land suitability related to the Houston South Vegetation Management and Restoration Project, we have gathered the following information. Attached is a map highlighting land suitability classifications in Management Area 2.8 of the Houston South Project. The land suitability classifications were

			<p>modeled for the 2006 Forest Plan (USDA FS 2006a) but never fully verified on the ground.</p> <p>Per the 2006 Forest Plan:</p> <p>³ Lands identified as not appropriate for timber production for the following reasons: assigned to other resource uses to meet Forest Plan objectives including all existing developed recreation sites; visually sensitive areas; and Management Areas 2.4, 6.2, 6.4, and 8.2; and bottomland areas of Management Area 2.8.</p> <p>For the Houston South Project, timber treatments are only assigned to lands falling in Management Area (MA) 2.8. We currently have 44 acres of hardwood thinning and 12 acres of pine clearcut that overlap with suitability classes 801 and 810 in MA 2.8 as identified on the attached map. We believe that these areas were modeled incorrectly and therefore misidentified as not suitable for timber production. None of these acres fall in bottomland areas, sensitive wildlife habitat, developed rec sites, old growth stands, experimental forest, or research natural areas. Again, we believe they were incorrectly modeled in 2006 and we plan to fully verify their suitability for harvest during the layout phase of the project. Furthermore, no matter the suitability classification, we always place proper buffers along riparian areas.</p> <p>It should also be noted that we have deleted treatments in areas that were modeled as suitable for timber production, but after further verification were deemed not-suitable. This included actual bottomland areas. This further highlights the inaccuracy of the modeled suitability classes.</p>
14	Thomas Hodnett 8/8/2019 (PR bb06)	I support all the management at the Houston track timber and vegetation.	Thank you for your support.

15	Sherry Mitchell-Bruker Friends of Lake Monroe 8/8/2019 (PR bb08)	Thank you for discussing the Houston South cumulative effects analysis with me last night. I hope that our discussion motivates HNF to conduct a more thorough cumulative effects analysis in the entire Lake Monroe Watershed.	See explanation of cumulative effects boundary on page 20 and cumulative effects on pages 27 - 28.
15-2	Sherry Mitchell-Bruker Friends of Lake Monroe 8/8/2019	Could you or the fire specialist provide us with data related to suppression of natural fires on the Pleasant Run unit? We would like to see the entire record of fire suppression activities for the Pleasant Run unit. We would be willing to come to your office to make copies or photographs if these records are not digitized.	Information provided via email on 8/12/19
16	Liz Jackson Indiana Forestry & Woodland Owners Association 8/8/2019 (PR bb07)	Thank you for providing further information during your recent open houses. I was impressed with the thoroughness of the information and especially the review of impacts to recreation, water, and wildlife. I am writing to support the implementation of the Houston South Vegetation Management and Restoration Project and encourage the Hoosier National Forest to move forward with the project immediately.	Thank you for your support.
16-2	Liz Jackson Indiana Forestry & Woodland Owners Association 8/8/2019	We were pleased to see specifically the focus on early successional and oak habitat that is sorely lacking in this region. This project was proposed in the 2006 Forest Plan and any further delay of the activity will result in further environmental damage; specifically lack of young forest (0-9 year age class), insufficient oak regeneration, and habitat loss for sensitive species dependent on the young forest environment. As one of the largest landholders, the Hoosier National Forest has the ability to manage projects of a size that can have an impact that is not possible by smaller private landowners.	Comment noted.
16-3	Liz Jackson Indiana Forestry & Woodland Owners Association	Protecting water quality, including the use of Best Management Practices (BMPs), is important with the proposed area draining into the Lake Monroe Watershed, which is a drinking water source in Indiana. The plan includes improvements to drainage on the South Fork of Salt Creek. These improvements	Comment noted.

	8/8/2019	in aquatic habitat with help to offset the poor quality in other areas of the general Salt Creek drainage.	
16-4	Liz Jackson Indiana Forestry & Woodland Owners Association 8/8/2019	The restoration of roads and trails is an important part in the sustainability of this proposed action. The steps outlined in the proposed action to reduce potential impacts which includes protecting water quality, cultural sites, soil quality and the visual quality of the area are important and need to be addressed. Emphasis should be given to reducing the spread of noxious weed populations and controlling existing non-native invasive species known to occur in the area.	Comment noted.
16-5	Liz Jackson Indiana Forestry & Woodland Owners Association 8/8/2019	Please move forward with the Houston South Vegetation Management and Restoration Project as soon as possible. The health of the local forest, habitat for declining forest species and the ability of Indiana citizens to enjoy and appreciate the diversity of Indiana forests will be enhanced.	Comment noted.
17	Todd Woods 8/11/2019 (PR bb09)	I support your proposal. The Houston South Vegetation Management and Restoration Project is important for sustainment of the area's native trees and habitat improvement as well as to provide a quality environment for recreational activities and quality timber in the future to support Indiana's forest product industry. The implementation of the plan by various methods, with consideration for all it's potential impacts, is by the very capable and professional staff of the U.S. Forest Service.	Thank you for your support

18	Dick Artley 8/11/2019 (PR bb11)	<p>Ranger Paduani, I ask you to have the courage to understand Webster's definition of "restoration." Here's what you will find:</p> <p>"bringing back to a former position or condition" "restoring to an unimpaired or improved condition"</p> <p>How can the Houston South timber sale be a restoration project given the fact it has never been logged before and the former condition was never a harvested landscape?</p> <p>How can the Houston South timber sale be a restoration project given the conclusions of hundreds of independent Ph.D. scientists quoted in Opposing Views Science Attachments #1 and #4 that describe the tragic, long-term resource destruction caused by roading and logging? What qualifications do you have to declare that the experts quoted below are wrong?</p>	<p>For this project, restoration is used in specific context to the need to take action to meet Forest Plan goals, including to, "Maintain and restore sustainable ecosystems" (Forest Plan 3-7).</p> <p>The project area is currently dominated by mature forest. Stand data in the proposed silvicultural treatment area shows no stands in the 0 to 9 year age class, therefore the desired amount of early successional forest habitat described in the Forest Plan (4-12 percent) is not being met. Many stands are dominated by mixed-oak and oak-hickory canopies, but competitive oak regeneration does not exist across a majority of the project area. Understories and mid-stories in these stands typically consist of shade-tolerant species such as American beech and sugar maple, leaving very few areas where oak or hickory species are able to compete to be a part of a future stand.</p>
18-2	Dick Artley 8/11/2019	I have presented quotes by Ph.D. scientists who are experts in their fields above that describe the ecological effects of logging and roading an undeveloped, fully functioning forest. How could a timber sale that 1) "compacts the soil", 2) "leads to increased runoff and erosion", 3) "homogenizes and destroys the soil", 4) "eliminates biodiversity", 5) "eliminates habitat required by bird species", 6) "damages watersheds", 7) "destroys wildlife habitat and imperiled plant and animal species", and 8) "increases fire hazard" be a "restoration" project?	<p>See response to comment 18.</p> <p>The environmental effects were analyzed and disclosed in the EA (pp. 14 - 71).</p>
18-3	Dick Artley 8/11/2019	Request for changes to be made to the final NEPA document: 1) Indicate which natural resources will be returned to an "unimpaired or improved" condition by logging and roading this timber sale area, 2) tell the public why you believe the resources are not functioning properly and need restoration, 3) discuss the natural resources in the area that could be harmed by the timber sale "treatments," 4) demonstrate how logging and roading will to "bring back to or put back the natural resources into a former or original" healthy,	This information can be found in the EA under Need for the Proposal (pp. 7 - 8), Environmental Effects (pp. 14 - 71), and References (pp. 72 - 79).

		fully functioning state and 5) list specific independent science quotes that show logging and roading the sale area will achieve natural resource restoration as you claim.	
18-4	Dick Artley 8/11/2019	Request for changes to be made to the final NEPA document: Analyze a no new road construction (including temp roads) action alternative in detail and assure the environmental effects disclosures are accurate which means you will discuss the resource damage that will be significantly reduced.	The interdisciplinary team considered an alternative that would avoid all new road construction. The team found that a no new road construction alternative would be an approximate 46 percent decrease from the number of harvested acres proposed. This alternative was eliminated from detailed analysis because it would not adequately meet the forest composition and age class objectives as provided in the project purpose and need.
18-5	Dick Artley 8/11/2019	Ranger Paduani, I ask you and your IDT members to have the courage to read the science conclusions of independent scientists not affiliated with the USFS in the Glyphosate kills attachment. You already know the USDA ignores the independent science that shows glyphosate causes cancer. You also know you are not required to apply herbicides that contain glyphosate.	Glyphosate was analyzed in the EA on pages 36 and 38. The EPA has issued an Interim Registration Review Decision and Responses to Public Comments for Glyphosate (April 2019). The interim review says the cancer concern was raised by citations of the International Agency For Research on Cancer's (IARC's) 2015 classification of glyphosate as "probably carcinogenic to humans." This is the World Health Organizations research group that has caused concerns of glyphosate causing cancer. EPA response: The EPA conducted an independent evaluation of the carcinogenic potential of glyphosate and has determined that glyphosate is "not likely to be carcinogenic to humans."
18-6	Dick Artley 8/11/2019	Request for changes to be made to the final NEPA document: Assure the following quote is included: "herbicides that contain glyphosate will not be used anywhere, at any time, for any reason as part of this project."	See response to comment 18-5
18-7	Dick Artley 8/11/2019	Assure the final NEPA document tells the public 1) why spending their tax money to take action to create fast growing, vigorous trees is more important than letting the trees grow at their own rate which provides biodiversity, 2) the names of the flora and fauna in the sale area that thrive in decadent slow-growing trees and 3). why biodiversity is not important in the project area.	The Houston South Project does not propose to take action to create fast growing, vigorous trees. The proposal is to create a healthier, more vigorous forest with our treatments. This would include increased growth in the residual trees as resources and growing space are freed up due to removal of harvested trees. This creates a healthier landscape that will be more resilient to climate change and the effects of forest pests and

			disease. (see vegetation specialist report) Also, these treatments are aimed at adding heterogeneity to both structure and trees species composition, which will increase biodiversity by creating a wider array of habitat types.
18-8	Dick Artley 8/11/2019	Ranger Paduani, never again fancy yourself as someone who takes action on land owned by 324 million Americans that they need and want. These people are your supervisors, yet you choose to backhand them by using their tax money to take an action (clearcut) over 90% of them have told you repeatedly they do not want. Of course you don't care what they want and don't want done to THEIR land do you. Why? You obviously feel the pesky public has no business interfering in USFS actions to create corporate profit opportunities.	The National Forests Management Act (NFMA) of 1976, 16 U.S.C. 1600 allows for the consideration of clearcutting as a silvicultural treatment in the development of land management plans (NFMA, Section 6(g)(F)(i)). The Hoosier National Forest Land & Resource Plan (Forest Plan) (USDA FS 2006a) includes the clearcut method as a viable option to achieve resource goals and objectives under certain conditions (Forest Plan, page 1-7). These conditions have been identified as part of the purpose and need for the project to remove non-native pine and establish native oak and hickory.
18-9	Dick Artley 8/11/2019	The IDT silviculturist(s) spent 4 years learning industrial forestry techniques intended to create corporate tree farm conditions. Not one acre of national forest land should be transformed by these people... even suitable land. There are a few IDT members who agree with what I am saying but they keep quiet and help you implement your appalling, calamitous clearcuts because they are afraid of you and they know if they don't perform as "team players" their promotion opportunities with an agency that has an overriding timber extraction agenda will be eliminated.	Comment noted.
18-10	Dick Artley 8/11/2019	The American public does not want their national forests to resemble the photos at the following link. http://www.bing.com/images/search?q=clearcut+photos&qpvvt=clearcut+photos&qpvvt=clearcut+photos&FORM=IGRE	The EA (pp. 7 - 9) provides the Purpose and Need for the project. This project is consistent with, and implements, the Forest Plan's Desired Condition of Management Area 2.8 (USDA FS 2006a). A Purdue University public opinion survey of Indiana residents found that 85 percent of Hoosiers approved of harvesting Indiana trees for woodland management if overseen by professional Foresters, 82 percent approved of harvesting Indiana trees to improve places for wildlife to live, and 95% approved removing some

			<p>trees to protect Indiana woodlands from spread of disease and wildfire.</p> <p>https://www.in.gov/dnr/forestry/files/fo-IN-Perceptions_ForsMgt_09.pdf</p>
18-11	Dick Artley 8/11/2019	Ranger Paduani, will you and your IDT members who aren't foresters be proud to pockmark and disfigure the public's land with ugly visual scars? Does it make you feel powerful? How will you justify your actions when recreationists come to your office complaining about clearcuts? Do you really think they will buy the optimum regeneration method BS?	<p>Pines are not native to the Hoosier National Forest. Converting pine plantations to native hardwoods is a goal stated in the Forest Plan. The proposal includes clearcutting nonnative pines that were planted to stabilize highly eroded and over farmed soils in the area that is now the Hoosier NF. Pine stands have become so dense that light conditions have inhibited regeneration. Pines have increased soil acidity, which can change the regeneration species composition.</p> <p>Additionally, a suite of wildlife species depends on young forest habitat. Even-aged management techniques would help develop this structure in the form of clearcuts and shelterwoods.</p>
18-12	Dick Artley 8/11/2019	Eliminate ALL proposed clearcut units. Use a partial cut RX and consider restoring the area to what it was before it was logged by planting the same on-site species regardless of their lumber value.	See response to comment 18-11
18-13	Dick Artley 8/11/2019	Provide data and text demonstrating that soil, slope, or other watershed conditions will not be irreversibly damaged by shelterwood silvicultural prescriptions.	Please see the Environmental Effects section of the EA for the potential direct and indirect effects of the proposed action on soil and water resources. The ID team incorporated management requirements and design measures in the project design to reduce any potential negative impacts to soil and water resources (EA, Appendix A). The Houston South project incorporates all relevant Forest Plan standards and guidelines as well as Indiana Best Management Practices.
18-14	Dick Artley 8/11/2019	Provide data and text demonstrating that shelterwood silvicultural prescriptions are appropriate to meet the objectives and requirements of the relevant land management plan.	The Hoosier National Forest was classified in 2005 by a Ph.D. thesis/project completed by Andriy Zhalnin and George Parker from Purdue University. This ecological classification model was used along with inventory data and field reviews to determine where the shelterwood system would be the most successful. A Forest Service certified Silviculturist made this determination using the

			best available science. Stand data and notes are available in the project record.
18-15	Dick Artley 8/11/2019	<p>Ranger Paduani, it is not only possible but highly likely that your logging and slash/RX burning will harm the habitat and/or kill individual birds. This is especially true of young birds that cannot flee the danger. The Treaty requires the NEPA document to include information showing why the following damage will not occur. The plaintiffs' attorney will expect the NEPA document to contain specific action that you will take to prevent:</p> <p>“harm the birds with logging-related pollution”, “detrimentally alter the bird's habitat”, “environmentally degrade the area surrounding the bird's habitat”, and “kill bird chicks by destroying their nests or eggs”.</p> <p>Note: The 4 quotes above come directly from the Act.</p> <p>Your draft EA doesn't come close to complying with the Act. It does not mention “migratory bird.” I suggest before you form another IDT you consider adding a wildlife biologist.</p> <p>Identify the birds that exist in and near the project area that are protected under the Migratory Bird Treaty Act and discuss how these birds will be protected during burning and timber harvest operations. The Act makes no allowance to consciously harm these birds for any reason.</p>	<p>The Migratory Bird Treaty Act (MBTA) implements the United States' obligations under international treaties and agreements regarding migratory bird protection. Section 703 of the Act makes it unlawful to “kill” or “take” a migratory bird, nest, or egg except as permitted under applicable regulations. There are no regulations governing take of migratory birds that is incidental to National Forest wildlife habitat modification. See 50 C.F.R. Part 21.</p> <p>A memorandum of understanding between the USDA Forest Service and US Fish and Wildlife Service was created to promote the conservation of migratory birds. In the MOU, both Parties “mutually agree that it is important to: 1) focus on bird populations; 2) focus on habitat restoration and enhancement where actions can benefit specific ecosystems and migratory birds dependent upon them; 3) recognize that actions taken to benefit some migratory bird populations may adversely affect other migratory bird populations; and 4) recognize that actions that may provide long-term benefits to migratory birds may have short-term impacts on individual birds” (FS Agreement # 08-MU-1113-2400-264).</p> <p>The effects of logging and prescribed burning on Federal Endangered, Threatened, and Forest Service sensitive species are disclosed in the EA. There is no requirement for additional mitigation for MBTA species that exist in or near the project area.</p>
18-16	Dick Artley 8/11/2019	<p>Ranger Paduani, your References section does not contain the following important literature or comparable literature; therefore your migratory bird discussions are based on unsubstantiated speculation. The public expects more from a professional wildlife biologist.</p> <p>DeGraaf, R. M., Rappole, J. H. 1995. Neotropical migratory birds: natural history, distribution, and</p>	See response to comment 18-15

		<p>population change. Comstock Publishing Associates. Cornell University Press, Ithaca, New York</p> <p>Migratory Bird Treaty Act. 1918. 16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended.</p> <p>NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer.</p> <p>Memorandum of Understanding between the U.S. Department of Agriculture, Forest Service and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds. (December 08, 2008).</p> <p>Identify the birds that exist in and near the project area that are protected under the Migratory Bird Treaty Act and discuss how these birds will be protected during burning and timber harvest operations. The Act makes no allowance to consciously harm these birds for any reason.</p>	
18-17	Dick Artley 8/11/2019	<p>Pretending to pass a project through the NEPA process with only 1 action alternative (the Proposed Action) makes a mockery of the National Environmental Policy Act. A “do it” or “don’t do it” NEPA analysis is not a NEPA analysis but a justification of the Proposed Action. There are alternatives ways to accomplish any goal.</p>	<p>Forest Service NEPA regulations (36 C.F.R. 220.7 (b)(2)) state: “The Environmental Assessment (EA) shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.”</p> <p>Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives.</p>
18-18	Dick Artley 8/11/2019	<p>Larry Freeman, the Senior Consultant for the Shipley Group that the USFS contracts to teach the NEPA process states: “A single action alternative is a risky agency choice, especially if you determine that your EA or EIS is likely to be a high-risk and controversial document.” Link to Mr. Freeman’s comment: http://www.shipleygroup.com/news/articles/0911.pdf</p> <p>36 CFR 220.7(b)(2)(i) states: “When there are no unresolved conflicts concerning alternative uses of</p>	<p>Most comments during the scoping period were questions regarding the proposal and requests to extend the scoping period. You are correct however, there were many commenters opposed to the project. It appears that the opposing respondents would not be satisfied with anything less than withdrawal of the proposal, so we have concluded that the no action alternative is the best approximation of what they might ask for.</p>

		<p>available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives.” NEPA Section 102(2)(E) states “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”</p> <p>The vast majority of the scoping comments submitted by the public are critical of the project and suggest changes in the Proposed Action. Therefore to comply with NEPA you must analyze another action alternative that is more ecosystem friendly and has much less adverse natural resource impact than the Proposed Action.</p>	<p>The concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
18-19	Dick Artley 8/11/2019	<p>Please don't ignore the Shipley Group NEPA recommendations as you prepare your final EA. The USFS spends millions of dollars to hire this company to teach agency employees how to apply the NEPA process correctly? Ranger Paduani, are your qualifications comparable to Dr. Freeman who works for the Shipley Group? They must be for you to ignore Dr. Freeman's advice that “A single action alternative is a risky agency choice, especially if you determine that your EA is likely to be a high-risk and controversial document.” Link to Mr. Freeman's comment: http://www.shipleygroup.com/news/articles/09111.pdf</p> <p>The scoping comments are highly critical of this timber sale.</p> <p>Analyze at least 1 additional action alternative in detail ... preferably an alternative suggested by the public as part of their scoping comments. Also expand the Purpose & Need to allow non-harvest alternatives. Based on reading the scoping comments and your responses to these scoping comments there are clearly “unresolved conflicts” with this proposed timber sale.</p>	<p>The issues that did identify a dispute with the proposed action based on an anticipated effect were resolved by analyzing the issues and addressing the concerns in the Environmental Effects section of the EA. This is not to say this will be acceptable to all people, as some oppose the project. The concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p> <p>Alternatives suggested by the public do not meet the Purpose and Need for this proposal, which is consistent with, and implements the Forest Plan (USDA FS 2006a).</p>

18-20	Dick Artley 8/11/2019	<p>Anyone responsible for protecting the land owned and loved by 324 million Americans must understand that their job under NEPA requires them to disclose and analyze all effects (positive and negative) resulting from project implementation. This includes industrial noise and dust effects. You have failed to analyze these effects. Here is the science. None of the literature below is contained in the References section of this pre-decisional EA. Please add it to the final.</p> <p>Please assure Chapter 3 discloses the noise effects to wildlife species according to the literature presented above. Chapter 3 should also disclose how noise and dust may adversely affect the recreation experience of human visitors to the forest.</p>	<p>Effects on wildlife species, due to the use of heavy equipment, could include dust and noise. Any effects from dust on wildlife would be limited to the immediate area the work is occurring in and should not travel great distances. Higher humidity would keep potential dust from spreading. Working in drier times of the year could have more potential for dust. This would be temporary and ample amounts of adjacent forest exist for wildlife to temporarily re-locate if they are disturbed.</p> <p>The effects on wildlife due to noise would also be limited. Wildlife in the area have ample amounts of adjacent forest for wildlife to temporarily re-locate if they are disturbed. There should not be any long-term negative impacts, from potential dust and temporary noise, on wildlife that may occur in the area.</p> <p>The Forest Plan EIS (USDA FS 2006) page 3-306 states: Noise associated with site preparations, planting, and timber harvest would be local and of short duration. Equipment used in these activities, such as chainsaws, bulldozers, and augers, can affect wildlife and recreational experiences. All alternatives would generate noise during road construction, reconstruction, and maintenance. However, all alternatives are expected to consider only minimal amounts of new road construction. The effects of these activities are expected to be local and short term. On roads closed to the public, noise from vehicle use for project implementation would be short term.</p> <p>Forest visitors should not be affected to noise and dust effects from harvest operation because the trail segment would be closed during harvest operations. Effects to recreation disruptions to was analyzed in the EA (pp 31 - 32)</p>
18-21	Dick Artley 8/11/2019	The public does not want natural resources in their public land that will be inherited by future generations to be destroyed in order to provide corporate profit opportunities. Opposing Views Science Attachment	The EA (pp. 7 - 8) provides the Purpose and Need for the project. This project is consistent with, and implements, the Forest Plan's Desired Condition of Management Area 2.8 (USDA FS 2006a).

		<p>#10 gives you the results of 16 statistically significant nationwide polls revealing the public's feelings about national forest logging. Depending on the poll between 63% and 81% didn't want logging. You propose to log 6.8 square miles. How can you justify calling yourself a public servant? In reality you are serving your corporate masters.</p> <p>Include some source documents from the Opposing Views Science Attachments in the References/ Literature Cited section, and also, cite the applicable specific quotes presented in the Opposing Views Science Attachments.</p>	<p>The commenter did not provide Opposing Views Attachment #10</p>
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18-22	Dick Artley 8/11/2019	<p>40 CFR 1502.21 allows you to incorporate material by reference. It also says:</p> <p>“No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment.”</p> <p>You tell the public they must drive or fly to Bedford, IN to inspect the hardcopy material in the project. This is not “reasonably available for inspection by potentially interested persons.”</p> <p>You hide important documents related to this project as hardcopies in the project record located in Bedford, IN. Most of these documents were created on your computer. Even a child has the computer skills to post electronic documents online. If the document was not created on the computer these children would know how to scan them and create a PDF file that could be posted online. Obviously, you do not want the public to read these documents. Why? Either they don’t exist or they aren’t truthful and don’t support this project.</p> <p>You and your IDT members will do anything to prevent the public from submitting critical comments as you have your way with the Hooser (sic) National Forest owned by 323 million Americans. These Americans want to provide you with informed, meaningful comments based on all the information available about the proposed project ... which you go out of your way to keep them from reading.</p> <p>Important information that would help the public understand the proposed project analysis disclosed in your draft EA is hidden away in the project record. It’s sad you use this illegal and unethical scheme to hide information from the public you claim to serve.</p>	<p>The project website contained much information regarding the project, including Specialist Reports, Biological Evaluations, Forest Carbon Assessment, etc. Material referenced in the draft EA can be delivered via email if it is not considered restricted material.</p>
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18-23	Dick Artley 8/11/2019	As you can see above, 40 CFR 1502.9(b) requires meaningful responses to all “responsible” opposing views. If the Responsible Official feels the opposing view is irresponsible then please describe why. The law does not exclude opposing views because of the source. Opposing views contained in newspapers, magazines, and other sources are still opposing views and require a response. Please do not conclude an opposing view is not responsible because they are opinions. “Viewpoint” and “opinion” are synonyms.	NEPA does not require a response to each opposing view quote or reference provided by the public. Nevertheless, the Forest Service has extensively reviewed comments provided by the commenter during the 30-day comment period and responded how each reference was considered in the completion of the analysis.
18-24	Dick Artley 8/11/2019	<p>Mr. Harriss, the Purpose & Need statement you authored at page 1-1 says “Wildlife habitat will be improved for ungulates and increased for species favoring open understories (i.e. goshawk, pygmy nuthatch and flammulated owl). Please explain how logging 6.8 square miles and building 11.5 miles of road will improve wildlife habitat given the clear science written by experts quoted below that say it won’t. You know this yet you are obedient and write it anyway. Please explain why you know more than the scientists quoted below. Please explain why you reject the science conclusions of the 4 Ph.D. experts in wildlife science and the 2017 quote by scientists who work at the U.S. Forest Service - Southern Research Station.</p> <p>Eliminate the untrue P&N statement that tells the public the Houston South timber sale will improve wildlife habitat.</p>	“Wildlife habitat will be improved for ungulates and increased for species favoring open understories (i.e. goshawk, pygmy nuthatch and flammulated owl)” is not a quote from any document of the Houston South Vegetation Management and Restoration Project.
19	Jim Koch 8/12/2019 (PR bb10)	<p>I am in favor of NO action in the Houston South Restoration project.</p> <p>On page 18 of the report there seems to be little downside to taking no action and considerable risk in taking the actions proposed (clear cutting, burning, herbicide application, and thinning). There are assumptions in the report, again on page 18, that stand a good chance of being incorrect and therefore also supporting NO action.</p>	Comment noted.

19-2	Jim Koch 8/12/2019	Climate change will affect the forest and is not completely predictable, at least it has not been completely predictable in other parts of the world. With us manipulating diversity now it has great potential of accelerating problems while not solving any problems.	Comment noted, thank you.
19-3	Jim Koch 8/12/2019	With the life spans of the oak and hickory trees being in hundreds of years, us trying to manipulate their environment to change in short term has the potential of making things worse. The forest management plans prescribed in this report have been shown to be detrimental by research done in the old growth forest stands in Europe. The risk of increased disease in the trees is possible, but is a small risk in my mind, considering the increased stress we put on the remaining trees by removing cover, heat stress and changing the insect and wildlife mix with opening up the understory.	Europe has different soil types and other environmental factors that do not compare well with the hardwood forests of Southern Indiana. The analysis for the Houston South Project was completed with the best available science. This project is consistent with, and implements, the Forest Plan's Desired Condition of Management Area 2.8 (USDA FS 2006a).
19-4	Jim Koch 8/12/2019	There is much that we do not understand about trees and I believe that less is more at least for now from the trees point of view.	Comment noted, thank you.
19-5	Jim Koch 8/12/2019	The environmental risks are present as well. The risk of damaging the water in Lake Monroe May be small, but the consequences are major if it is damaged and will not easily be rectified.	Comment noted, thank you.
19-6	Jim Koch 8/12/2019	The carbon increase from the burns may be insignificant on a world view, but thinking globally and acting locally seems very appropriate and in fact is very important.	Comment noted, thank you.
19-7	Jim Koch 8/12/2019	The trails used in the forest also damage the forest and leaving them as is preferable to trying to improve them.	Some trails in the project area are in riparian areas or in poor locations and could be contributing sediment to streams.
19-8	Jim Koch 8/12/2019	Spraying herbicides in the forest to try to control non native species has the potential of having unintended consequences, and seems unwarranted.	Control of NNIS would be implemented in accordance with the existing Forest's Nonnative Invasive Plant Control Program Analysis.
19-9	Jim Koch 8/12/2019	There is an abundance of private land for timber harvest without using land that we as a societal owners control and protect. Harvesting timber on public lands is wrong.	For the Houston South Project, timber harvesting is a tool to accomplish the proposed action, not the reason.
20	Ann Pace 8/13/2019	Water quality in Lake Monroe is a significant concern. The Hoosier National Forest's management goals	Effects to soil and water can be found in the EA (pp. 14 - 28)

	(PR bb12)	include "maintain and restore watershed health." Lake Monroe is already experiencing challenges from growing levels of sediment and nutrient loads, as well as excess algal growth. How will the proposed Houston South project maintain or restore watershed health for both drinking water and recreational use	
20-2	Ann Pace 8/13/2019	The Indiana Department of Environmental Management (IDEM) has issued Recreational Advisories for Lake Monroe in each of the past three years. Forests are the best possible cover type to protect water quality. If a water body is already impaired, the Clean Water Act prohibits further degradation.	The Clean Water Act is in place to protect unnecessary and excessive discharge of source and non-source pollutants. Tolerable amounts are allotted from point discharges if they don't exceed water quality threshold. Non-point sources are required to have mitigations in place (BMPs) to minimize effects to water quality. The reason of impairment must be assessed. The impaired streams within the Houston South project boundary are impaired due to E. Coli and low dissolved oxygen. Risks imposed by timber harvesting are sedimentation (siltation) and potential added low concentration nutrients from displaced soils. None of the streams in the project area are impaired from siltation, algae growth or nutrients. Land management activity is permitted within an impaired watershed if it does not compound the current reason for impairment. Although this supports our project activity within the watershed, implemented mitigations are used to minimize these risks. No harvest activity would occur within the 100-year floodplain, riparian buffers would be used around all headwater streams, and erosion control BMPs would confine the majority of sediment within the project area.
21	Pat McFadden NWTF 8/13/2019 (PR bb13)	The National Wild Turkey Federation (NWTF), is writing you to express our support for the management activities outlined by the scoping document for the Houston South Vegetation Management and Restoration Project. The NWTF advocates for over 230,000 members, with nearly 6,000 of those residing in Indiana. We are stewards of wildlife, their habitats, and functional ecologies and support the use of sound science to guide conservation and management practices of wildlife and habitat as per the North American Model of Conservation.	Thank you for your support.

21-2	Pat McFadden NWTF 8/13/2019	<p>We continue to see a decline in a variety of early successional habitats throughout Indiana, and in turn, we are seeing declines in species that rely on these habitats (e.g., ruffed grouse). The proposed treatments within the scoping document will greatly improve the vegetative structure and age diversity of the forest, resulting in improved forest health. Specifically, there are currently no stands classified as young forest (ages 0-9 years) within this unit, which conflicts with the forest plan goal to maintain 4-12% in young forest habitat. Additionally, the disturbance created through timber harvest coupled with prescribed fire and additional management activities will aid in the regeneration of oak and hickory species while reducing the vigor of shade tolerant species like maple and American beech. Oak and hickory species provide hard mast that is critical to an array of wildlife species including the wild turkey. Wild turkeys like many other wildlife species rely on a diversity of forest age classes and compositions to meet their life cycle needs. Thus, we strongly support the implementation of the management activities outlined in the scoping document for the Houston South Vegetation Management and Restoration Project which will create a greater diversity on the forest of habitat types and forest stand age and composition while supporting a greater diversity of wildlife species.</p>	Thank you for your comments.
22	Bowden Quinn Sierra Club Hoosier Chapter 8/13/2019 (PR bb14)	<p>One question I had that got answered at the Bloomington open house is why there are no trees of any species listed in the 0-9 year category. The reason is that all of the trees in that age group are growing under taller trees, and a "stand" is defined by the tallest trees in an area. So that listing is not telling us that there are no trees in that age group growing in the forest, but there haven't been any clearcuts in the last several years to make that age group into a stand.</p>	<p>The stand age is assessed by looking at the age class of the dominant, or in many cases, codominant trees of the stand. We call these trees codominant because they all regenerated following the same disturbance which makes them all the same age class and in most cases similar in size. While there may be thousands of smaller, younger trees down below they are overtopped by the larger trees and therefore not used to define the age class for the stand.</p> <p>A young stand does not always have to be initiated via clearcut harvest. Both natural disturbances, such as wind or fire events, and other harvest techniques, such</p>

			<p>as the shelterwood system, can create a young forest stand as well. Although, your statement about clearcuts is correct for Houston South. The youngest stands in the area were initiated by hardwood clearcuts in the 1980s.</p> <p>While your statement saying the “tallest” trees define the age class is often true, it’s not necessarily always the case. In some cases you could have a couple of taller, older trees per acre that were remnants from a previous stand, but the majority of the stand might consist of shorter, younger trees that initiated following a major disturbance. In this case we would classify the stand age by the shorter, younger trees since they dominate a majority of the stand.</p>
23	David Parkhurst 8/14/2019 (PR bb25)	I believe that many Hoosiers like me would like your timber management in our National Forests to be very different from what you’ve laid out in the Houston South Vegetation Management and Restoration Project. Specifically, please allow oak-hickory forests to age, to produce very large trees.	This project is consistent with, and implements, the Forest Plan’s Desired Condition of Management Area 2.8 (USDA FS 2006a).
23-2	David Parkhurst 8/14/2019	Also, allow forests to undergo natural succession to climax forests including maple and beech, where the soils and climate allow that. Many bird species, and other wildlife, are adapted to the habitats in both these kinds of forests.	Many locations in the project area have site characteristics that favor beech and maple. The regeneration of oaks or hickories would not be attempted at those sites.
23-3	David Parkhurst 8/14/2019	Indiana’s people should not have to travel great distances (emitting carbon dioxide from their vehicles along the way) to isolated examples of such fine areas like the Pioneer Mother’s Memorial Forest. We want many more such forests in the National Forest lands that belong to all of us. In addition, mature forests are important carbon dioxide sinks, helping to reduce global warming.	The Forest Plan EIS (USDA FS 2006b) Page 3-99 shows that under the selected alternative (of the EIS), 81% of the Hoosier National Forest will be mature hardwood. This habitat type will still be provided on the Forest.
23-4	David Parkhurst 8/14/2019	I applaud getting rid of planted pines from areas in the state where they were not present pre-settlement. I understand from Deam’s <i>Trees of Indiana</i> , for example, that the only conifer native to Monroe County was <i>Juniperus virginiana</i> .	Thank you for your support.
24	Jim & Brenda Heidelberg	We are land owners of property that shares a border with the Forest. The project as described lacks	The Jackson County Commissioners have publicly stated that County Road 625 North is a public road.

	8/15/2019 (PR bb27)	<p>sufficient detail for us to understand the impact this project will have on our property value, our privacy and our peace of mind as well as how long these factors will affect our lives. To date we understand the project may last 10 to 20 years, will include logging that will require rebuilding a non existent road base that runs through our property, the road may or may not become a public access point when the logging is finished, the logging contracts will last 1-3 years, and the designated logging sites may or may not be the ones reflected on the maps we have seen.</p> <p>The effect this has on our property value is significant. We planned to build a house on this property but will not if public traffic, hunters, bicycles, hikers, and ATV's will be passing through our property to gain recreational access to the Forest.</p>	<p>A 2019 boundary survey which was completed for the Heidelberger's prior to them purchasing the larger 9.81-acre parcel. The survey plat clearly identifies the location of the unimproved County Road 625 North, which bisects the 9.81-acre parcel, and shows the road extending to the southern boundary of the Forest. In addition to surveying the property, the Heidelberger's had the 9.81-acre parcel subdivided into four smaller tracts. The subdividing of this parcel into four building sites would not have been possible without each lot having direct access to a County road, which is the unimproved County Road 625 North. The Jackson County Highway Department has stated that they will reopen the road when the first home is built on one of the four new lots. If the Forest Service (FS) needs the road opened before the first home is constructed, then the FS will need to enter into a road maintenance agreement with Jackson County prior to reconstructing the road. Once County Road 625 North is reopened, any member of the public will be able to drive on this road up to the National Forest boundary.</p>
24-2	Jim & Brenda Heidelberger 8/15/2019	<p>We can not determine if commercial use of our adjacent property will restore its value. We simply do not have enough information to understand the financial impact this will have on our lives for the next 10 to 20 years nor do we wish this to become a public acid access point. Ample public access points are already available within a 2 mile radius of this area. Another one simply is not needed.</p>	<p>It should also be noted that affected landowners are currently using parts of this unimproved County Road to access the National Forest trail system by foot and by horse. They can do so, without a special use permit, since this road is technically a County Road, even the portion on National Forest System Land. Any member of the public can legally walk on this road from the open County Road 1250 North to National Forest Lands, if they are willing to climb over several fences which presently cross the road.</p>
24-3	Jim & Brenda Heidelberger 8/15/2019	<p>We have enjoyed the peace and tranquility of our property. We understand the need for this project. However, 10 to 20 years of potential loss to what we currently enjoy in our country life style, puts us past our time of life to enjoy this.</p> <p>Our privacy is important to us. At this point we are faced with not knowing if we are losing this forever to a</p>	<p>The opening/reconstruction of County Road 625 North is necessary in order to provide access to five harvest units. Silvicultural treatment and associated sales within an identified unit typically occur for 1 to 3 years.</p> <p>Due to drainages and steep slopes, this proposed route is the best haul option for these units.</p>

		public access site, or if it is going to be lost to logging trucks for 1-3 years, or if this will last 10 to 20 years.	
25	Michael Bean 8/21/2019 (PR bb29)	<p>A couple of quick questions....who / what is the ID team referred to in the EA....who compromises the Forest Leadership Team, and could you comment on why they choose this particular area of the available MA 2.8 acreage...</p> <p>I would also ask who is the Decision Maker for this project? is it the Regional Forester? I am still learning the process...after public comment closes, who reads the comments and are they required to release and publish their conclusions? Then, at what time will the Decision Of Record be made?</p> <p>Finally, I am curious why I have seen no comment on project cost...road building expense...projected income from timber sales...how many board feet are projected to be harvested...who pays for restoration and reclamation of disturbed areas, trails, and decommissioning of temporary roads...what happens to timber sale money... how much of the total cost of this project is Taxpayer dollars...</p>	<p>The Decisionmaker (Responsible Official) for this project is District Ranger Michelle Paduani. After the 30-day comment period concludes, the ID team will analyze the comments and the Responsible Official will consider the comments. She will decide what further analysis or information will be included in the final EA. There is no requirement of a response to comments for an EA, 36 CFR 218.25(b) Consideration of comments states, (1) "The responsible official shall consider all written comments submitted in compliance with paragraph (a) of this section" and (2) "All written comments received by the responsible official shall be placed in the project file and shall become a matter of public record." However, the Hoosier typically posts a Response to Comments document to the project's website.</p> <p>A final EA and draft Decision Notice will be completed after any necessary additions to the draft EA are completed. Then, a 45-day objection period will occur. Any objections filed will be reviewed by an off-Forest administrative review team. As stated at 36 CFR 218.12 (b), "The responsible official may not sign a ROD or DN subject to the provisions of this part until all concerns and instructions identified by the reviewing officer in the objection response have been addressed."</p> <p>Forest Service policy is that a minimum of \$0.25 per hundred cubic feet (CCF), except for qualifying salvage or stewardship sales, must be deposited into the National Forest Fund (Forest Service Manual 2431.31). Above this minimum deposit to the Treasury, Congress has authorized several methods for the Forest Service to retain and spend revenue from federal timber sales.</p> <p>The Knutson-Vandenberg Act of 1930, and amendments, allow funds from timber sales to be held in trust by the Forest Service for required reforestation activities such as planting, removing undesirable trees</p>

			and protecting and improving future productivity of renewable resources on the forest land in the timber sale area.
26	Jane Fitzgerald Central Hardwoods Joint Venture 8/23/2019 (PR bb30)	<p>Please accept this letter as endorsement of the Houston South Vegetation Management and Restoration Project #55119 by the Central Hardwoods Joint Venture.</p> <p>We believe this project will result in improvements in habitat structure for forest bird species such as Cerulean Warbler and Wood Thrush, both species of conservation concern as noted on the Partners in Flight Watchlist.</p> <p>...a mix of forest management techniques across a landscape can be important in providing the variety of habitat structure needed by a mix of forest-breeding birds, from those in need of the shrubby growth of early-successional forests, to those using the structure that comes from thinning with single tree and group selection methods.</p>	Thank you for your support and your comments.
27	Michael Bean 8/23/2019 (PR bb31)	<p>Apparently, the project management team was determined to reach a FONSI conclusion and never seriously entertained preparing a more in depth EIS. Page 58 mentions “effects relative to the FONSI elements”, yet no place within the 80 page document do you find a sentence that clearly states that a FONSI conclusion had been reached or recommended. The DEA goes to great length to selectively address only 12 issues although hundreds of questions were received from over 90 respondents during the scoping comment period</p>	<p>40 CFR 1501.4 states “In determining whether to prepare an environmental impact statement the Federal agency shall: (c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement.</p> <p>A FONSI determination is made at the time of the draft decision notice.</p> <p>The 12 issues were based on scoping comments. Many of the comments were similar. The Response to Scoping Comments document provided a response to each statement, comment, and question received.</p>
27-2	Michael Bean 8/23/2019	I believe the current DEA document is full of shortcomings and unresolved issues pertaining to “significant impacts” and “unresolved conflicts”. The 10 elements / regulations / definitions published by the Council on Environmental Quality for implementing the	Comment noted

		National Environmental Policy Act (NEPA) establish a threshold that must be met in order to declare a FONSI finding. I do not believe this threshold has been met entirely nor completely.	
27-3	Michael Bean 8/23/2019	Definition 1) states that “impacts may be both beneficial and adverse”, and the DEA does acknowledge in numerous paragraphs throughout the document that proposed actions will create “significant impacts”, such as timber harvest activities, road building, prescribed burning, etc.; actions “will” disturb soil, create compaction, erosion, sedimentation and turbidity, there will be GHG and carbon sequestration issues, RFSS, NNIS, and watershed health concerns, for example. At each and every point, time and again, the DEA simply states that mitigation, management requirements, BMP’s and specific design measures “would or should” minimize or eliminate potential “significant impacts” in the long term. The DEA admits that many short term negative impacts will exist, but conclude that all will be well and “beneficial” in the long run. This cavalier attitude compounds the unresolved conflicts surrounding significant impact potential.	The draft Environmental Assessment does not state the proposed action will create significant impacts.
27-4	Michael Bean 8/23/2019	Definition 4) states that “the effects on the quality of the human environment are likely to be highly controversial”, and this is the case. Much controversy exists on many levels, both in opposition to the proposed actions as well as significant dispute concerning the effects of the actions. One unanswered question, why choose to conduct “forest ecosystem health” silvicultural treatments on this particular 4000 acre harvest and 13,000 acre burn area of management 2.8 that includes steep slopes and directly impacts the South Folk Salt Creek sub-watershed that feeds directly into the Monroe Lake watershed? Why not an alternate location	<p>There is no South Folk Salt Creek sub-watershed. The four watersheds that ultimately drain into the Lake Monroe Reservoir include the South Fork Salt Creek, Middle Fork Salt Creek, North Fork Salt Creek, and Lake Monroe-Salt Creek watersheds. The proposed Houston South project occurs in the South Fork Salt Creek watershed.</p> <p>The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age. Other areas in Management Area 2.8 are likely to be considered in the future.</p>

27-5	Michael Bean 8/23/2019	Why run the risk of detrimental soil disturbances, increased sediment run-off, increased water yield, potential algae blooms due to nutrient flush, and possible “significant” damage to the municipal water supply of communities within the Monroe Lake watershed. To simply offer an array of BMP’s, DSD and turbidity testing, with modifications to be made should the acceptable thresholds be exceeded, is highly controversial and full of unresolved conflict. Common sense asks, since when is half (9%) of too much (15%) a good thing? DEA pages 21-25 discuss Forest Disturbance Monitoring Protocols, eutrophication rates and the employment of appropriate BMP’s to potentially “mitigate these detrimental impacts”	<p>There is no known credible scientific controversy over the impacts of the proposed action. Differing opinions do not indicate controversy.</p> <p>There are no unresolved conflicts because the concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
27-6	Michael Bean 8/23/2019	Once the trees are harvested and the soil disturbed and the DSD and turbidity rates exceed set thresholds, adjusted BMP’s “will be too little too late” to mitigate the detrimental effects upon the watershed and the landscape. Furthermore, unresolved conflict exists concerning the heavy dependence upon the proper usage and deployment of BMP’s across the entire project spectrum. The Forest service own internal documents for LRMP, the Biennial Monitoring and Evaluation Report 2016-17, indicates a “less than stellar” track record for effective BMP’s district wide. Marginal success rates are not acceptable. Does the issue revolve around adequate supervision, appropriate manpower, budget restraints? Who is responsible for the application of BMP design measures; contractors, USFS employee’s, contract and timber sale administrators? These, and other unresolved conflicts (road building, trail rehabilitation, mitigation of skid landings, return of temporary roads on trails to pre-existing condition, NNIS, herbicide, prescribed burn, recreation and economic issues) absolutely compound the issue of potential “significant impact” and “controversial effects on the environment”.	<p>The Biennial Monitoring and Evaluation Report is separate from project-level monitoring.</p> <p>The Hoosier National Forest has a timber sale administrator whose primary job is to monitor harvest activities and ensure loggers follow all provisions of the timber sale contract. The contract would include specifications that comply with Forest Plan standards and guidelines and all relevant Houston South Project design criteria.</p> <p>This project is consistent with and implements the Forest Plan (USDA FS 2006a). The use of resources is addressed in the EA, the Forest Plan and the Forest Plan EIS. Coupled with the No Action Alternative, there are no unresolved conflicts.</p>
27-7	Michael Bean 8/23/2019	Definition 7) states that “significance exists if it is reasonable to anticipate a cumulative impact on the	The proposed project affects a relatively small amount of forest land and carbon on the Hoosier National Forest

		<p>environment”. I believe the various issues related to climate change, GHG release, carbon sequestration and forest growth present the opportunity for cumulative negative “significant impact” across the entire project spectrum. These unresolved conflicts have both short and long term effects. The DEA devotes much discussion (Issues 11 & 12, pages 53-58) to these issues. The general conclusions state that “relatively small quantities of carbon are released and the short-term effect are justified” and that “initial carbon emissions will be balanced and possibly eliminated as the stand regenerates because newly established trees typically have higher rates of growth and carbon storage”. There is a growing body of research and data that refutes the aforementioned DEA conclusions. The July 2019 paper “Forest Carbon, Protection and Stewardship” (Sierra Club) cites numerous studies that indicate that primary, mature canopy forests “store more carbon than younger forests” and that less intensive management “results in less overall emissions of forest carbon”. It is quite simple, every harvest increases GHG emission and reduces storage capacity creating a net carbon debt. “At the stand level, if the original forest was mature and subsequent logging occurs in cycles much shorter than the age of the original older trees, the forest will never reach its pre-logging carbon store, thus creating a carbon debt”.</p>	<p>and, in the near-term, might contribute an extremely small quantity of GHG emissions relative to national and global emissions. This project will not convert forest land to other non-forest uses, thus allowing any carbon initially emitted from the proposed project to have a temporary influence on atmospheric GHG concentrations, because carbon will be removed from the atmosphere over time as the forest regrows.</p> <p>Furthermore, the proposed project will transfer carbon in the harvested wood to the product sector, where it may be stored for up to several decades and substitute for more emission intensive materials or fuels. This proposed action is consistent with internationally recognized climate change adaptation and mitigation practices.</p>
27-8	Michael Bean 8/23/2019	<p>These effects are cumulative. Climate change also presents many significant impacts. The Indiana Climate Change Impacts Assessment concludes that climate trends indicate wetter Springs with intense flooding followed by longer, hotter, drier Summers that will: increase soil erosion, slow tree growth, present decline of Maple, Beech, Tulip, and favor Oak – Hickory regeneration; projected trend will effect proliferation of invasive species and pathogen disease. Common sense suggests that conservation and preservation of mature stands coupled with less intensive harvest and more sustainable forest</p>	<p>As described by NEPA, cumulative effects result from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.</p> <p>We considered climate change in the project design and analyzed climate change as an issue.</p>

		management (longer rotation cycle, wider Riparian Zones, more live tree retention) can mitigate the cumulative impact of climate change, improve the management of carbon, and benefit wildlife habitat, biodiversity and ecosystem health.	
27-9	Michael Bean 8/23/2019	Definition 9) seeks to identify actions that “may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act”. The DEA lists six qualifying species and states there are “no known occurrences on the Forest”. I believe the listed Northern Long-Eared Bat may be present based upon personal involvement with the recent IFA Ecoblitz conducted July 2019. The Bat Survey was conducted by trained biologist’s from Environmental Solutions INC (Dale Sparks, contact), and two confirmed Northern LEB were captured by net and the roost tree was located by telemetry with corresponding emergent count conducted. The area was in HNF Berry Ridge near the Nebo Trail, and I believe this falls within the extended five mile buffer around the project area. Results have yet to be published, however, extra attention should be given to ensure no negative effects adversely impact this protected species. Special rules should be applied to project activities according to Northern Long-eared Bat guidelines.	<p>The draft EA states, “There are no known occurrences of the northern long-eared bat within the area of the proposed actions according to the Indiana Heritage Database.” The project biologist assumed NLEB to be present. “Project activities should not affect winter hibernacula of the northern long-eared bat directly or indirectly. Project activities may affect summer habitat, swarming/staging habitat, roosting habitat, foraging habitat and travel corridors. Effects are believed to be short-term with project activities showing long-term improvements with increased solar exposure for maternity colonies, potential roost creation, increase in better foraging potential, and an increased water supply by vernal pool creation.”</p> <p>The proposed project would have no additional effects on the northern long-eared bat beyond those previously identified and evaluated in the 4(d) Rule for the Northern Long-Eared Bat Project (USDI FWS 2016).</p>
27-10	Michael Bean 8/23/2019	As I understand the rules, failure to meet any one of the 10 definition regulations must result in a finding that “significant impacts” do exist. Four out of ten are challenged, and I believe that a FONSI declaration cannot be made based upon the current DEA as presented. A more comprehensive EIS is warranted and should be ordered by the Responsible Officer.	Comment noted. A draft decision notice will be made available with the final EA.
27-11	Michael Bean 8/23/2019	I have additional comments that I would like included on the record. First, I believe the proposed AOP, three culvert upgrades, are warranted and are a very good idea. They hold the promise of improved aquatic passage and better stream conditions with reduced bank erosion and reduced levels of sedimentation.	Thank you for your comments.

		This will improve watershed health for both the South Fork Salt and Monroe Lake.	
27-12	Michael Bean 8/23/2019	Second, I agree that portions of our trail system are in disrepair and need upgrades and rehabilitation. However, I am not convinced that turning our trails into temporary logging roads or skid landings is the best method. Why bulldoze, grade, rock fill and compact a 12 foot wide temporary road that, at project end, must be returned to pre-existing conditions? The dollar expense alone, to build and then decommission, is not economically sound. Personally, when I hike trails within the HNF, I prefer the experience of treading along an earthen path underneath a mature canopy of trees. I have no interest in rounding a bend or topping a ridge to hike upon a gravel path (improved trail condition) through a clear cut, fire burned, early succession "field of weeds" full of stumps and timber harvest slash. I enjoy wilderness, backcountry forest conditions when I hike, camp, and canoe in our public lands.	Comment noted.
27-13	Michael Bean 8/23/2019	Third, I am concerned that the Forest Management Team did not present several Alternative Action Plans for this project. (The 2006 Forest Plan had eight alternatives with the selection of #5 on the Record of Decision). If the No Action Alternative is the only choice, then I advocate for the Responsible Officer to go on Record and select this no management action. The HNF has survived and flourished quite well since acquisition of the forest, and it should be allowed to mature naturally without human impact. Perhaps the Responsible Officer could require additional Alternatives to be developed that specifically address the many unresolved conflicts and potential negative significant impacts that have been raised by the public.	Forest Service NEPA regulations (36 C.F.R. 220.7 (b)) state: "The Environmental Assessment (EA) shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed." Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives.
27-14	Michael Bean 8/23/2019	Finally, I thank you for the opportunity to offer my public comments for your consideration. Again, I strongly urge the Responsible Officer to not issue a FONSI declaration at this time, based upon this Draft Environmental Assessment. I believe that a more extensive Environmental Impact Statement is	Thank you for your comments.

		warranted due to the unresolved issues and controversy surrounding this proposed Houston South VMR project. Please continue to place the policy of conservation and stewardship of the HNF above and before the timber commodity harvest mentality. Protect our watersheds, promote old growth conditions, and employ forest sustainability techniques to combat climate change and improve carbon storage capability.	
28	Emily Jo Williams American Bird Conservancy 8/23/2019 (PR bb32)	Please accept this letter as endorsement of the Houston South Vegetation Management and Restoration Project #55119 from American Bird Conservancy (ABC). Our staff work both with state and federal land-managing agencies and on private lands initiatives in a number of areas in the Great Lakes, Appalachians, and Southeastern Coastal Plain using and encouraging the use of silvicultural practices to improve forest structure for forest songbirds, including the imperiled Cerulean Warbler, Golden-winged Warbler, Wood Thrush, and Prairie Warbler.	Thank you for your support.
29	Caitlin Schneider-Frantz 8/23/2019 (PR bb33)	The U.S. Forest Service (USFS) incorrectly claims in the Draft Environmental Assessment (EA) that there are no unresolved conflicts that warrant development and analysis of additional alternatives, in spite of public requests to consider new options. The proposed action remains virtually unchanged since the initial November 2018 scoping letter despite more than 500 comments > 90% of which expressed concerns or outright opposition from citizens, local business, and environmental organizations representing more than 10,000 people in the State of Indiana.	<p>The Hoosier received comments from 90 individuals or groups. Most comments during the scoping period were either questions regarding the proposal or requests to extend the scoping period. There were many concerns and opposition, but there were many supportive comments as well. Every comment was considered, and a response was given.</p> <p>Issues derived from comments were analyzed in the EA. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction.</p>
29-2	Caitlin Schneider-Frantz 8/23/2019	The USFS fails to recognize the important role it plays as the largest land manager in the Lake Monroe watershed, dismissing with minimal and flawed analysis, public concerns related to the potential impact of this project on the water quality of the sole municipal water source for more than 120,000 residents. This project may include clearcutting and/or other logging on several thousand acres of steep slopes draining into the South Fork of Salt Creek which	<p>The effects to soil and water were analyzed in the EA with consideration of slopes, South Fork of Salt Creek, and Lake Monroe.</p> <p>See response to comment 20.2</p>

		flows into Lake Monroe. Citing agriculture as a significant sediment runoff problem (without evidence) does not relieve the USFS from its obligation to consider the proposed action's contribution to non-point source pollution in the currently impaired Lake Monroe watershed and the impaired South Fork Salt Creek watershed.	
29-3	Caitlin Schneider-Frantz 8/23/2019	<p>The EA relies heavily on the 13-year-old Forest Management Plan which pre-dates vital information:</p> <p>a) Harmful algae blooms have been the cause of recreational advisories for Lake Monroe for each year for the past nine years. IDEM lists timber harvesting among the common causes of non-point source pollution that feed blue-green algae blooms. Unlike many watersheds in Indiana, the Lake Monroe watershed is heavily forested, and nutrient loading cannot be solely attributed to agriculture.</p> <p>b) Understanding of the impacts, timing, and importance of climate change has increased dramatically since the 2006 Forest Plan was developed and the most recent report from the International Panel on Climate Change states that we have 12 years to turn around net carbon release in the atmosphere. In this context, short-term releases from cutting and burning in this project cannot be acceptable.</p> <p>c) Using a 2011 assessment to evaluate glyphosate safety does not consider recent findings that raise concerns about its safety and environmental impact. These and many other "unresolved conflicts" must be addressed.</p>	<p>Site-specific soil and water effects were analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.</p> <p>The EPA website at: https://www.epa.gov/ingredients-used-pesticide-products/glyphosate states: "Glyphosate is a widely used herbicide that controls broadleaf weeds and grasses. It has been registered as a pesticide in the U.S. since 1974. Since glyphosate's first registration, EPA has reviewed and reassessed its safety and uses, including undergoing registration review, a program that re-evaluates each registered pesticide on a 15-year cycle.</p> <p>In April 2019, EPA released the Glyphosate Proposed Interim Decision for public comment. As part of this action, EPA continues to find that there are no risks to public health when glyphosate is used in accordance with its current label and that glyphosate is not a carcinogen."</p>
29-4	Caitlin Schneider-Frantz 8/23/2019	<p>With no or minimal analysis or scientific basis, the EA dismisses numerous short-term impacts as insignificant, including the following:</p> <ul style="list-style-type: none"> • loss of carbon-sequestering trees; • impact on wildlife: migratory neo-tropical and ground-nesting birds and removal of roosts for endangered Indiana and other bats; 	<p>For carbon-sequestering, see 29-3 above</p> <p>The effects to wildlife on the Regional Foresters sensitive species list were analyzed in the <i>Biological Evaluation for Regional Foresters Sensitive Species</i> and summarized in the EA. The effects to endangered and threatened species were analyzed in the <i>Biological</i></p>

		<ul style="list-style-type: none"> • impact on recreation and local economy to horse riders, hikers, primitive campers, businesses and others resulting from years of trail closures, including the highly valued Knobstone Trail; • increased soil erosion and movement due to road construction; and • impact of prescribed burning: on the release of greenhouse gasses, effects on human health and air quality, and the loss of vegetation and subsequent erosion and nutrient release. 	<p><i>Evaluation for Threatened and Endangered Species</i> and summarized in the EA. For migratory birds, see response to comment 18-15.</p> <p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>The effect of the proposed prescribed fire was analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water, Project Scale Carbon Effects – Houston South Project Environmental Assessment, and Report for the Houston South Environmental Assessment - Effects to Air Quality and Fuels</i> and summarized in the EA.</p>
29-5	Caitlin Schneider-Frantz 8/23/2019	The finding of no significant impact relies heavily on successful implementation and effectiveness of best management practices (BMPs), which is not consistent with past HNF records or with the available personnel resources. The USFS has not evaluated the risk of major soil erosion due to the increasing frequency of extreme rain events.	Trained timber sale contract administration personnel make regular inspections of harvesting operations to ensure successful implementation and effectiveness of BMPs. The analysis for soil and water was completed during the spring and summer of 2019. There were times of heavy precipitation during this period, especially in June. At the Hardin Ridge weather station, June 15-17 saw 5.73 inches of rain. Overall, the total precipitation for June 2019 was 11.04 inches. That is a +6.15-inch departure from normal. The project soil scientist/hydrologist completed field evaluations during this time. He evaluated and documented the flooded streams in the project area and considered this in the analysis. Thus, extreme rain amounts were in consideration during the analysis for this project.
30	Noel Taylor 8/23/2019 (PR bb34)	After reviewing the current map, I am of the opinion that it would be more cost effective and environmentally sound to nuke the whole area than to implement the proposal in its current form. Surely the Army Corps of Engineers could bring in a low-yield "clean" nuclear device that could clear the whole area if detonated on one of the involved fire towers. The savings resulting from eliminating the salaries and equipment expenditures in your district would more	Comment noted.

		than compensate the loss of hardwood profits. Please reconsider your current plan accordingly. Thank you!	
31	Mary Bookwalter 8/23/2019 (PR bb35)	This Houston South Project in the Hoosier National Forest in the watershed of the reservoir Monroe is troubling from the beginning. I believe it to the city of Bloomington and the 250,000 users of this reservoir to speak for themselves to speak of the threats of erosion, and the pesticide applications of further management. The city government of Bloomington has spoken on this matter and deserves great weight. As there is no ground water alternative in this area. The treatment of our reservoir for algae bloom and sedimentation is of great importance for this community.	Forest Plan standards and guidelines along with Indiana Best Management Practices would be employed to achieve soil and water conservation objectives. When Forest Plan standards exceed Indiana BMPs for water quality standards, Forest Plan standards take precedence.
31-2	Mary Bookwalter 8/23/2019	I would like to discuss the somewhat wrongheaded attitude of wildlife benefits of managing this acreage for oak and hickory after the logging of those very same trees. Maplewood is actually highly desirable and yet the management plan seems to be destroying maple trees. The flooring in our own home in Indianapolis is close-grained and beautiful maple and milled from Owen County. There is a huge market and good pricing on maple and do not need to be destroyed with ecological restoration.	Many locations in the project area have site characteristics that favor beech and maple. The regeneration of oaks or hickories would not be attempted at those sites.
31-3	Mary Bookwalter 8/23/2019	My husband and I also own property in Owen County that abuts the Hoosier National Forest and treasure that experience and wild nature it provides. Within a ten minute walk we can reach the Knobstone Trail and travel the back of Nebo Ridge and go to Browning Hill, a treasured spot, and sit absorb the most beautiful view from the silt/sand stone seats there. A fork of Salt Creek makes the valley below and off in a distant more forest from Brown County State Park, it's stunning to us fortified Flatlanders. It is only 1.5 hours away from this city of Indianapolis where there is so very little access to wild nature. People are often kayaking and tubing this tumbling stretch of the Middle Fork. Their laughter hangs in the air and through this untouched forest.	There is no National Forest System land in Owen County.

31-4	Mary Bookwalter 8/23/2019	Burning is not protecting herpetofauna. Many such as box turtles bury themselves deep into detritus and several mole salamanders are vulnerable during “appropriate times” to burn.	The EA discusses the tradeoffs of prescribed fire on pages 39 - 47
31-5	Mary Bookwalter 8/23/2019	The environmental assessment of 2006 is frankly no longer applicable to today’s understanding of effects of climate change on ecosystems. There are definitely unresolved issues in this environmental assessment. Countless letters and meetings have been pointed out to the Property Manager of the Hoosier National Forest, Michael Chaveas. Regrettable mistakes in our wildlife improvements are already being made by excellent foresters who have served in the west by using the same methods of the western forests. They are not applicable in Indiana. This is not a fire driven regime here, please don’t propose burning where it is not needed. This small eastern hardwood forest is our last vestige of wild area in Indiana. The wildlife inhabitant needs more passive management in the face of changing climate, the effects of which we do not know what is actually happening, we ask for more. How can we really know if we don’t stop and look instead of charging on.	<p>We are assuming the commenter is referring to the 2006 programmatic Forest Plan EIS. The Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region (Dugan et al.) was completed in June 2019. Site-specific carbon and greenhouse gas emissions were analyzed in the Project Scale Carbon Effects – Houston South Project Environmental Assessment and summarized in the EA.</p> <p>Differing opinions do not indicate unresolved issues. Issues were analyzed in the EA. There are no unresolved conflicts because the concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative. Michael Chaveas is the Forest Supervisor, but he is not the Responsible Official for the project. The District Ranger is the Responsible Official for the project.</p> <p>Site specific analysis of prescribed fire and wildlife was completed in project specialist reports and biological evaluations and summarized in the EA.</p>
31-6	Mary Bookwalter 8/23/2019	Lastly, the amount of roads to drive the skid-teers, feller bunchers, and opening log yards robs forest users, people, and wildlife any sense of beauty, safety, and repose.	Comment noted, thank you.
32	Curt Mayfield 8/23/2019 (PR bb36)	Speaking as an individual who has spent many years hunting in the HNF and fishing in Lake Monroe, I was shocked to learn of this plan to plunder the forest for no reason except to satisfy the greed of the politicians in Washington. Further I am dismayed that no one in the Forest Service or the Fish and Wildlife Service has the courage to stand up and push back on this plan. There are many reasons both scientific and aesthetic that preclude implementation of this plan to remove such a huge amount of the forest and I would urge you to give them adequate consideration.	The proposed project is consistent with and implements the Forest Plan (UDSA FS 2006a). The Forest Plan states, “The desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat and up to an additional 3 percent as openings. The Forest manages the area primarily for plant and animal habitat diversity and timber harvest is an appropriate tool for use in this area” (Forest Plan 3-28).

33	David Haberman 8/23/2019 (PR bb40)	<p>I am a frequent hiker in the Hoosier National Forest, as a resident of Bloomington I get my drinking water from Lake Monroe, and as a parent and college teacher I have growing concerns about the rapidly increasing negative effects of climate change.</p> <p>...I want to speak specifically to the issue of the unnecessary loss of vital carbon sequestration and the intentional release of carbon this project would entail. I am particularly troubled by what is written on page 58 in your draft EA (much of this is based on dated research that was used to produce your 2006 Forest Plan), which in many ways dismisses any real concern about these two factors as "minimal." Latest research shows that removing mature forest cover at this moment in the climate crisis is very wrongheaded with respect to mitigating climate change, and doing so by burning huge sections of forest seems downright insane. I worry that your data on climate change is woefully out of date and that your research on the value of mature forests very limited. If you like, I would be happy to send more updated research data to your electronically, but my sense is that this data is available to you if you really want to take stock of where we are as we move into the latter half of 2019. Do we really need more forest openings for wildlife in the Hoosier when so much of Indiana already has many such landscapes? Our public lands would serve us much better as sites of carbon sequestration and recreation for a wide variety of activities.</p>	The Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region (Dugan et al.) was completed in June 2019. Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.
33-2	David Haberman 8/23/2019	To be clear: I am strongly against moving ahead with this project and call upon your agency to listen to the public outcry against it that is based on more updated research, especially with regard to protecting municipal water supplies and to responding to the current and alarming threats of climate change. Many "unresolved conflicts" surely remain to be addressed with this project!	<p>Comment noted.</p> <p>This project is consistent with and implements Forest Plan direction to maintain 4 to 12 percent of the area in young forest habitat (USDA FS 2006a).</p>
34	Julie Lowe 8/23/2019	The scoping document for Houston South Project received significant opposition from the public. Despite	See response to comment 29

	(PR bb37)	that, the Environmental Assessment released by the Forest Service varies little from the original Scoping document, notably lacking is any recognition of that opposition.	
34-2	Julie Lowe 8/23/2019	The 2006 Forest Management Plan is thirteen years old and does not address the serious climate changes we are and will continue to experience. Current scientific assessments are showing that the change is happening more quickly than previously predicted. Antarctica is losing ice twice as fast as anyone thought. ¹ Helheim, one of Greenland's fastest-retreating glaciers, has shrunk about 6 miles since scientists came there in 2005. ² July, 2019 was the hottest month ever recorded on Planet Earth since consistent record keeping began in 1880.	The Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region (Dugan et al.) was completed in June 2019. Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.
34-3	Julie Lowe 8/23/2019	The Forest Service answer to my question about the effects of climate change on the Houston South Project was, "The Hoosier National Forest operates under the 2006 Forest Plan, which is tiered to the Forest Plan EIS, which is valid until revised. There are no plans for a revision. Climate change is addressed in the draft EA." This does not adequately address my question. The Houston South project is planned to last 10-12 years. The Intergovernmental Panel on Climate Change, (IPCC) is an intergovernmental scientific body of the United Nations and their recently released report gives mankind 10-12 years to act to prevent catastrophic effects from climate change.	This proposed action is consistent with internationally recognized climate change adaptation and mitigation practices. Please refer to <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> at: https://www.fs.usda.gov/nfs/11558/www/nepa/110474_F_SPLT3_4670166.pdf
34-4	Julie Lowe 8/23/2019	Jim Skea, a co-chair of the working group of the IPCC said " <i>the main finding of his group was the need for urgency. Although unexpectedly good progress has been made in the adoption of renewable energy, deforestation ... was turning a natural carbon sink into a source of emissions</i> ". ³	Please see response to comment 34-3 above.
34-5	Julie Lowe 8/23/2019	The Forest Service's response to my statements and questions, "Carbon emissions during the implementation of the proposed action would have only a temporary influence on atmospheric carbon. The proposed activities in the Houston South project are not considered a major source of greenhouse gas	Please see response to comment 34-3 above.

		(GHG) emissions,” refuses to acknowledge the urgency and severity expressed in the IPCC report.	
34-6	Julie Lowe 8/23/2019	Industrial logging can create large-scale carbon emissions. More logging occurs in the U. S. Forests than in any other nation in the world, making the U.S. the largest global problem in terms of carbon emissions from logging. Only one third of the carbon stored in harvested trees is “carried over” in wood products. Our planet should benefit by using the forest as a carbon sink instead of the Forest Service sending more carbon into the atmosphere by harvesting timber.	Our Houston South analysis modeled data on the Hoosier and in the Houston South project. Our model showed the Hoosier becoming carbon neutral and perhaps even a carbon source if no management occurs. Please refer to <i>Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region</i> at: https://www.fs.usda.gov/nfs/11558/www/nepa/110474_F_SPLT3_4670167.pdf
34-7	Julie Lowe 8/23/2019	The 2006 Forest Plan goal of maintaining and restoring sustainable ecosystems could be understood in the context of a time when the current climate crisis was not fully understood. These times demand a different set of actions. What the Forest Service does in the next few years will most definitely affect the outcome of our climate crisis. Any deforestation will negatively impact our planet. The Forest Service should use the existing forests as a resource for carbon sequestration and stop using our forests for timber. The Forest Plan should be revised to reflect the need for action to address the crisis related to carbon emissions and atmospheric carbon sequestration by recommending the cessation of any logging.	Please see response to comment 34-6 above.
35	Dana Frantz 8/24/2019 (PR bb41)	I strongly oppose the Houston South logging project in the Hoosier National Forest. This forest belongs to me, my children, my grandchildren and all future Hoosier citizens. It was not preserved for lining the pockets of a few rich timber men who will scar the forest and reduce its ability to sequester carbon at a time when more trees are badly needed. Leave our forest alone!	Please see response to comment 34-6 above.
36	Katherine Brumbaugh 8/24/2019 (PR bb42)	I am greatly concerned about the logging plan for Houston south. I do not feel time is being taken to study the adverse affects this would have on the creek which feeds the reservoir which is used by so many people.	Site-specific soil and water analysis are in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA. https://www.fs.usda.gov/project/?project=55119
36-2	Katherine Brumbaugh 8/24/2019	There are already algae problems reported. Enough already! Haven’t we depleted enough forests? We need ALL we can save as a buffer.	See response to comment 36 above.

36-3	Katherine Brumbaugh 8/24/2019	This greedy mentality of logging for money is way out of line. This is not the legacy we should leave the next generation.	The proposed project is consistent with and implements the Forest Plan. The Forest Plan states, "The desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat and up to an additional 3 percent as openings. The Forest manages the area primarily for plant and animal habitat diversity and timber harvest is an appropriate tool for use in this area" (Forest Plan 3-28).
37	Sarah Bowers 8/24/2019 (PR bb43)	I am against the Houston South logging project in the Hoosier National Forest for several reasons. Why is the U.S. Forest Service not hearing the more than 500 comments, more than 90% of which expressed concerns or outright opposition from citizens, local business, and environmental organizations representing more than 10,000 people in the State of Indiana?	Please see response to comment 29.
37-2	Sarah Bowers 8/24/2019	I understand that this project may include clearcutting and/or other logging on several thousand acres of steep slopes draining into the South Fork of Salt Creek which flows into Lake Monroe. While the USFS cites agriculture as a significant sediment runoff problem (where is the evidence on this claim?) the USFS should be obligated to consider the proposed action's contribution to non-point source pollution in the currently impaired Lake Monroe watershed and the impaired South Fork Salt Creek watershed.	See response to comment 20.2 The effects to soil and water were analyzed in the EA with consideration of slopes, South Fork of Salt Creek, and Lake Monroe.
37-3	Sarah Bowers 8/24/2019	My support is with the Friends of Lake Monroe who believe that this project will have the following impacts: <ul style="list-style-type: none"> • loss of carbon-sequestering trees; • impact on wildlife: migratory neo-tropical and ground-nesting birds and removal of roosts for endangered Indiana and other bats; • impact on recreation and local economy to horse riders, hikers, primitive campers, businesses and others resulting from years of trail closures, including the highly valued Knobstone Trail; • increased soil erosion and movement due to road construction; and 	Please see response to comment 29-3 and 29-4.

		<ul style="list-style-type: none"> • impact of prescribed burning: on the release of greenhouse gasses, effects on human health and air quality, and the loss of vegetation and subsequent erosion and nutrient release. 	
38	Susan Hollis Bassett 8/24/2019 (PR bb44)	I am extremely opposed to any logging in the Houston area. This is in our watershed area of Lake Monroe. It doesn't make sense to pollute our drinking water and fill our lake with sediment.	Site-specific soil and water analysis are in the Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water and summarized in the EA.
38-2	Susan Hollis Bassett 8/24/2019	Logging companies need to pay a higher, fairer price for purchased cuts. The public is not supplementing the logging industry.	Before any National Forest timber is sold, it would be appraised to estimate the products' fair market value. A timber sale is offered competitively, and the contract is normally awarded to the firm offering the highest bid.
38-3	Susan Hollis Bassett 8/24/2019	Property taxes limits need to be lifted so our government can operate in a reasonable manner.	Property taxes limits are beyond the scope of this project.
39	Christopher Haynes 8/24/2019 (PR bb45)	I strongly oppose the Houston South Logging Project. It will eliminate a great deal of oak/hickory forest without a proven regrowth strategy, adversely effect recreational use, and harm the Lake Monroes water quality.	Site-specific analysis for effects to soil and water, vegetation, and recreation were analyzed in Specialist Reports and summarized in the EA.
40	Glen Merzer 8/24/2019 (PR bb46)	At a time when the Amazon is burning down, apparently the U.S. Forest Service, instead of protecting the Hoosier National Forest, has plans to cut and burn some of it. These plans are a threat to the air we breathe and the water we drink from Lake Monroe.	Site-specific analysis for effects to soil and water and to air quality were analyzed in Specialist Reports and summarized in the EA.
40-2	Glen Merzer 8/24/2019	Are there no limits at all to human stupidity?	Thank you for your comment.
41	Tom Hougham 8/25/2019 (PR bb38)	The U.S. Forest Service (USFS) incorrectly claims in the Draft Environmental Assessment (EA) that there are no unresolved conflicts in spite of public requests to consider new options. Water quality and wildlife impacts are among these conflicts.	Effects to wildlife on the Regional Foresters sensitive species list were analyzed in the Biological Evaluation for Regional Foresters Sensitive Species and effects to endangered and threatened species were analyzed in the Biological Evaluation for Threatened and Endangered Species and summarized in the EA. Site-specific analysis for effects to soil and water analyzed in a Specialist Report and summarized in the EA.

			Differing opinions do not indicate unresolved conflicts. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction.
41-2	Tom Hougham 8/25/2019	The USFS is the largest land manager in the Lake Monroe watershed and has dismissed public concerns related to the impact of this project on the water quality of the sole municipal water source for more than 120,000 residents.	See response to comment 28 Effects to soil and water quality were analyzed in the Specialist Report and summarized in the EA.
41-3	Tom Hougham 8/25/2019	The EA relies heavily on the 13-year-old Forest Management Plan which pre-dates vital information. Climate change has increased the severity of rain events creating greater siltation from steep slopes that have proposed logging. This siltation could impact water quality and lead to harmful blue green algae blooms.	Please see response to comment 29-5 and 34-2.
41-4	Tom Hougham 8/25/2019	More options must be developed and an Environmental Impact Statement must be developed. An EA is insufficient in analyzing this project.	Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives. 40 CFR 1501.4 states "In determining whether to prepare an environmental impact statement the Federal agency shall: (c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement. A finding of no significant impact determination is made at the time of the draft decision notice.
42	John Byers 8/26/2019 (PR bb47)	Please preserve this area - don't cut anymore trees. This poor abused planet needs all the trees it can get!	Please refer to the Purpose and Need on page 7 of the EA.
42-2	John Byers 8/25/2019	Disturbing the ground will increase the already building sediment in Lake Monroe. This is the only water source for Bloomington. Once it's done, there's nothing else.	Effects to soil and water quality were analyzed in the Specialist Report and summarized in the EA.
42-3	John Byers 8/25/2019	Do your job and don't cower to the moneyed interests.	Comment noted.
43	Robert Meitus 8/25/2019	I am writing to strongly encourage the US Forest Service to consider new options with respect with the Houston South Vegetation Management and	Comment noted.

	(PR bb48)	Restoration Project in the Hoosier National Forest. I believe the USFS's draft environmental assessment does not recognize negative impact this project will have on the water quality for 120,000 residents in the area surrounding Lake Monroe.	Effects to soil and water quality were analyzed in the Specialist Report and summarized in the EA.
43-2	Robert Meitus 8/25/2019	There will be significant sediment runoff problems without a doubt.	Please see response to comment 43 above.
43-3	Robert Meitus 8/25/2019	The current assessment relies on a 13-year-old forest management plan that leaves out critical new information regarding harmful algae blooms, net carbon release of the logging, glyphosate safety concern, and soil erosion problems. Until such important issues are studied and a new environmental assessment is completed, I strongly urge the USFS to postpone moving forward with this project.	Please see response to comment 29-3.
44	Karen Huss 8/26/2019 (PR bb39)	I approve of the Houston South Project management plan. This management is long over due and is essential to propagate the oak/hickory forest and provide openings and young forest habitat that are needed for many wildlife species. I believe if BMPs are followed the harvest activities will not impact watershed water quality.	Thank you for your comments.
45	Vane Lashua 8/26/2019 (PR bb49)	It appears to me that the Houston South project deserves your close attention. Please read (and pay attention to) https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Findianaforestalliance.org%2Fhoustonsouth-8-26%2F&data=02%7C01%7C%7C61db09e3ec924ad5255f08d72a29e472%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C0%7C1%7C637024231729571477&sdata=x3YzXjUMVrjIDFTqBotynaFy0Ad%2F40I5tOaenKWrEQs%3D&reserved=0 (IFA website)	Comment noted.
46	Tom Zeller 8/26/2019 (PR bb77)	Timbering will increase erosion. The EA did not adequately address this issue. The EA did not estimate or model the runoff, but concluded it was negligible. The Forest Service has not put forth a	The EA identified the risks of erosion from harvest activities and identified that Forest Plan standards and guidelines, BMPs, and specific project design criteria to ensure protection of soil and water resources.

		<p>detailed plan for monitoring soil erosion (and deposition into Lake Monroe) for the Houston South Project, nor has it performed a baseline study for area so the amount of increase would be known.</p>	<p>The EA states on page 26, "Since the South Fork Salt Creek watershed borders the municipal Lake Monroe-Salt Creek watershed, four sites are currently being monitored for stage, discharge and turbidity. The sites are: South Fork Salt Creek at Kurtz, South Fork Salt Creek near Maumee, Negro Creek and Callahan Branch."</p>
46-2	Tom Zeller 8/26/2019	<p>Lake Monroe is a critical water supply for the region. It is also an important recreational and tourism magnet, generating more than \$20 million per year in tourism (Source: Army Corp of Engineers: http://www.corpsresults.us/recreation/fastfacts/lake.cfm?LakeID=293). Timbering in the watershed will increase sedimentation, affecting water quality and fish habitat. The proposed use of herbicides on thousands of acres will also increase the burden on the lake. The EA did not adequately address this issue.</p>	<p>The impact on recreation, soil and water, and herbicide use was analyzed in each respective Specialist Reports and summarized in the EA.</p>
46-3	Tom Zeller 8/26/2019	<p>The proposed activities will temporarily disrupt 20.6 miles of the Hickory Ridge trail and 3.5 miles of the Fork Ridge fork ridge. No-cut buffer zones should be established around trails to protect them from damage and disruption.</p>	<p>The impact on recreation was analyzed in the Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation and summarized in the EA.</p>
46-5	Tom Zeller 8/26/2019	<p>In response to my comments on the scoping document concerning below-cost timber sales, the USFS states:</p> <p>"Timber harvest is a tool to accomplish the proposed action, not the reason for the project."</p> <p>I dispute this statement. As an observer of USFS actions on the Hoosier National Forest for thirty-five years, I detect a clear bias towards timber harvest. I have seen the USFS change its rationale multiple times, but each time the conclusion was that more cutting was required. In the 80's, when we pointed out the lack of oak-hickory regeneration, we were told we were wrong, and the cutting should continue. In the 90's we were told that the oak-hickory shouldn't even be there, and was only present because of deforestation, erosion, and overgrazing in the 1920's</p>	<p>Comment noted.</p> <p>The Houston South Project is consistent with and implements the 2006 Forest Plan (USDA FS 2006a).</p>

		<p>and 30's, and therefore more cutting was fine. Later in the 90's the USFS developed a since-abandoned Ecological Classification System (ECS) that attempted to lay out the natural outcome for each set of conditions (soil type, mesic/xeric, slope, etc.) and then prescribe management to achieve that goal. Then around the turn of the century Prometheus granted the USFS the miracle of fire, and it has been a religious convert ever since, resulting in prescription for more cutting plus FIRE! I can only conclude that the desired outcome of every exercise is cutting, and that the USFS will create a convincing-sounding narrative to support that outcome. Despite its multiple-use mandate and rhetoric, the USFS completely fails to perceive the forest as an ecosystem with many dimensions of value, such as recreation, soil and water conservation, and wildlife habitat, and instead timber harvesting seems to be the paramount value. When the USFS talks about the "health of the forest" it appears to be talking only about maximizing timber value, at the expense of the other values of the ecosystem.</p>	
46-6	Tom Zeller 8/26/2019	<p>Even if one accepts timber harvesting as a tool rather than an outcome, there is still no reason the timber should not be sold at market rates or at least near market rates. A floor should be set for timber bids. If the minimum bid is not met, the stand is more valuable for water and soil conservation, recreation, and wildlife habitat than as timber. Not all of the forest needs to be managed as an industrial tree farm. A natural forest has its own value even if the USFS doesn't particularly like the silvicultural outcomes that nature might provide.</p> <p>Accounting for timber sales should be sufficient to determine the true cost of, and hence actual profit or loss from, the sale. The cost of road-building should be included in the cost of the timber sale. Stand marking should include an indication of veneer and other high-quality trees and the sale price should reflect the</p>	<p>The Hoosier National Forest is not managed as a tree farm, see response to comment 46-5 above.</p> <p>The IDT conducted an economic analysis, that included road construction, and found the project to have a benefit cost ratio of 1.79. See response to comment 38-2.</p>

		quality of the stand. The Forest Service should consider the value of the undisturbed forests as a tourism magnet for the area, which likely exceeds the income from timber sales. The sale of timber lands must, by the basic laws of economics, depress the value of private woodlot timber sales, raising the question of the appropriateness of such sales, especially in light of the values of an undisturbed forest.	
46-7	Tom Zeller 8/26/2019	The proposed project includes fifteen miles of new roads and reconstruction of an additional seven miles. Construction of roads is disruptive to the forest ecosystem. Roads are the antithesis of the typical desired woodland recreational experience. No one's idea of forest recreation is walking down a thickly graveled road to a clear-cut. The cost of roads should be included in the cost of harvesting the timber, as otherwise they would not be necessary.	<p>The project proposes 11.5 miles of road construction and 5 miles of reconstruction.</p> <p>Effects of road construction and reconstruction on animal communities was analyzed in the Forest Plan EIS (USDA FS 2006) (pp 3-108 to pp. 3-110).</p> <p>The impact on recreation was analyzed in the Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation and summarized in the EA.</p> <p>See response to comment 46-6 above regarding cost.</p>
46-8	Tom Zeller 8/26/2019	The Indiana Bat has been listed as endangered since 1967. USFWS lists one of the main vulnerabilities for the bats is the reduction of summer habitat (https://www.fws.gov/midwest/endangered/mammals/inba/index.html). That alone should put a halt to these harvest plans.	A Biological Evaluation for Threatened and Endangered Species was completed by the project's wildlife biologist. This project would have no additional effects on the Indiana bat beyond those previously identified and evaluated in the Hoosier National Forest Programmatic Biological Assessment (USDA FS 2005) and the USDI Fish and Wildlife Service Programmatic Biological Opinion of the Hoosier National Forest Land and Resource Management Plan (USDI FWS 2006).
46-9	Tom Zeller 8/26/2019	The project proposes to burn essentially all of the project area (10,200 to 12,300 acres, with the latter number representing the addition of willing participation by adjacent landowners). That is excessive and heavy-handed management that fails to recognize the value of an undisturbed ecosystem. Burning will disrupt forest recreation. It also fails to recognize the negative effects on some of the ecosystem's inhabitants such as amphibians, small mammals, insects, and ground nesting birds. It should	<p>Effects to Regional Forester sensitive species were analyzed in the Regional Forester Sensitive Species Biological Evaluation (BE). The BE concluded that the project would have a beneficial impact to the ruffed grouse and American woodcock.</p> <p>Effects to reptiles were also analyzed and disclosed in the BE and summarized in the EA.</p>

		<p>be noted that affected ruffed grouse and woodcock have been designated by the regional forester as “sensitive species.”</p> <p>In their synthesis of fire-oak literature Daniel et. al. state: “mid-spring prescribed fires are probably disruptive to ground-nesting birds such as ruffed grouse, wild turkey, and several species of neotropical songbirds and are potentially lethal to herpatofauna just emerging from winter hibernation (Beaupre and Douglas 2012).”</p> <p>(The Fire—Oak Literature of Eastern North America: Synthesis and Guidelines Patrick H. Brose Daniel C. Dey Thomas A. Waldrop, available at https://www.fs.fed.us/nrs/pubs/gtr/gtr_nrs135.pdf)</p> <p>(Beaupre, S.J.; Douglas, L.E. 2012. Responses of timber rattlesnakes to fire: lessons from two prescribed burns. In: Dey, D.C.; Stambaugh, M.C.; Clark, S.L.; Schweitzer, C.J., eds. Proceedings of the 4th fire in eastern oaks conference. Gen. Tech. Rep. NRS-P-102. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 192-204.)</p> <p>The Forest Service maintains that the existing oak-hickory forest is the result of near-constant and nearly complete fire-based management of the forest by Native Americans. While certainly some natural fires must have occurred, there is little or no strong evidence that such comprehensive management by Native Americans occurred with such regularity and on a scale that would essentially create the modern Hoosier National Forest, and frankly I find this narrative to be unlikely. The academic literature points to evidence of past fires, and evidence of some forest management by Native Americans, especially on the Eastern seaboard, but there is only a presumption that Native Americans must have done such extensive burning in the Midwest. My understanding is that</p>	<p>The effects of prescribed fire have been analyzed and disclosed in the EA.</p> <p>The use of fire and the clearing of land by Native Americans and European settlement has already been determined in the Forest Plan EIS (USDA FS 2006b). The EIS discusses the historical context of the southern Indiana landscape (3-74 to 3-77).</p>
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46-10	Tom Zeller 8/26/2019	<p>The main elements of the proposal, timbering and burning, are predicated on the need for regeneration of oak-hickory after timbering. Despite decades of research, the approach of a two-stage harvest with intervening burning does not have a long enough track record to be convincing. Implementing this strategy on one of the world's best oak-hickory forests, perhaps the best oak-hickory forest, reminds me of the now-horrifying early attempts at restoring painting masterpieces. We have an oak-hickory forest, but it seems we must cut it down to save it. A dangerous experiment, indeed!</p> <p>In its zeal to promote timber harvesting, it seems the Forest Service is overlooking nature's own management techniques of windfall and lightning strikes. Such events would provide smaller openings in the canopy than the Forest Service's planned large-scale harvesting cuts, but these small windfalls across the forest might result in sufficient amount young age acreage to approach the 4-12% that the Forest Service finds optimal. While it is true that some existing oak-hickory sites might mature into beech-maple climax forest type, not all sites would do so, especially those with more xeric (dry) conditions that favor oak-hickory such as south-facing slopes and those with thin soils.</p>	<p>Comment noted.</p> <p>The natural disturbances that you mention occur only in small patches. The damage is not heavy or large enough to create early-successional forest habitat at a desired (stand) level. Some wildlife species benefit from small gaps in tree canopy, but others are area-sensitive and require large patches of early successional forest habitats for all or part of their life cycle.</p> <p>Stand data in the proposed silvicultural treatment area shows no stands in the 0 to 9-year age class, therefore the desired amount of early-successional forest habitat described in the Forest Plan (4-12%) is not being met by natural disturbances.</p>

46-11	Tom Zeller 8/26/2019	<p>While a young forest grows faster than a mature forest, with a moment's reflection one realizes that despite the growth rate, a young forest does NOT store as much carbon in 50 years as the mature forest held at age 100 when it was cut. This is because the mature forest also experienced the faster growth rate during its first 50 years, and then continued to grow, albeit at a slower rate, for another 50 years.</p> <p>Thus, while the growth rate is an important factor, ultimately it is the amount of carbon held in storage out of the atmosphere that matters most. So, what happens to the carbon in the mature forest that is harvested? For starters, less than half of the carbon-storing wood becomes long-lasting building materials. Half the carbon is returned to the atmosphere relatively quickly from the soil disturbance, the brush and treetops left behind, wood chips used for burning, and so forth. In fact, so much carbon is lost from the deadwood and forest floor litter that a new forest requires about 15 years of growth to contain as much carbon as the site contained immediately following the harvest and removal of mature trees</p> <p>(Luyssaert, S., E.D. Schulze, A. Borner, A. Knohl, D. Hessenmoller, B.E. Law, P. Ciais, and J. Grace. 2008. Old-growth forests as global carbon sinks. <i>Nature</i> 455:213-215.).</p> <p>A University of Washington concludes:</p> <p>"When carbon stocks accounted only for forest sequestration, the longer the harvest cycle, the greater the amount of carbon removed from the atmosphere. Only when product substitution was considered in the analysis did we find that forestry can lead to a significant reduction in atmospheric carbon by displacing more fossil fuel-intensive products."</p>	<p>Site-specific carbon and greenhouse gas emissions were analyzed in the Project Scale Carbon Effects – Houston South Project Environmental Assessment and summarized in the EA.</p> <p>The referenced article in <i>Nature</i> is in a section called letters. It's a synthesis of research combining data in boreal and temperate forests. Boreal forests are mainly in Canada while temperate forests fall in the United States. They looked at data from 519 plot studies that reported one or more components of the carbon cycle. The authors state that in forests that are between 15 and 800 years old, they found them to continue sequestering carbon, but the rate slows down. Our Houston South Report modeled data on the Hoosier and in the Houston South project area. Some of the areas in the referenced study may be similar to the Hoosier, but most are not. Our model showed the Hoosier becoming carbon neutral and perhaps even a carbon source if no management occurs. Additionally, the article didn't account for the carbon that is stored in wood products.</p> <p>The University of Washington study concluded that forest products led to a significant reduction in atmospheric carbon by displacing more fossil fuel-intensive products in housing construction. The result has important policy implications since any incentive to manage forest lands to produce a greater amount of forest products would likely increase the share of lands positively contributing to a reduction of carbon dioxide in the atmosphere.</p> <p>The referenced article in <i>Science</i> is a study from a western hemlock and douglas fir stand in Oregon and Washington, not the hardwood forests of southern Indiana. Additionally, the study is from 1990.</p> <p>The referenced Duke study is a nationwide study. We have a model for both the Hoosier and the Houston South project in our analysis. The central hardwood</p>
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		<p>between 2010 and 2050. These losses would represent a significant decline (50–80%) in anticipated carbon sequestration associated with the existing timber harvest”</p> <p>(Depro, Brooks M., Brian C. Murray, Ralph J. Alig, and Alyssa Shanks. 2008. Public land, timber harvests, and climate mitigation: Quantifying carbon sequestration potential on U.S. public timberlands. <i>Forest Ecology and Management</i> 255: 1122–1134. Available at: http://naldc.nal.usda.gov/download/21039/PDF)</p> <p>Two global databases that include classification for management indicate that managed forests are about 50 years younger, include 25% more coniferous stands, and have about 50% lower C stocks than unmanaged forests.</p> <p>Effects of forest management on productivity and carbon sequestration: A review and hypothesis A. Noormets, D. Epron, J.C. Domec, S.G. McNulty, T. Fox, G. Sun, J.S. King. <i>Forest Ecology and Management</i> 355 (2015) 124–140, available at https://www.srs.fs.usda.gov/pubs/ja/2015/ja_2015_mcnulty_001.pdf)</p> <p>In conclusion, maximum carbon sequestration will occur in a forest that is not constantly harvested for timber.</p>	
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46-12	Tom Zeller 8/26/2019	<p>Robinson et. al. found that forest fragmentation reduces nesting/reproductive success, with up to 95% predation by cowbirds (<i>Molothrus ater</i>), resulting in the forest being a “sink,” or net negative to population reproduction, to the nine neotropical species studied. Specifically, they state that “cowbird parasitism was negatively correlated with percent forest cover for all the species” studied. In addition, other nest predators such as mammals, snakes, crows, blue jays, and raccoons are “likely to be more affected by landscape-level habitat conditions.” The authors conclude</p> <p>“a good regional conservation strategy for migrant songbirds in the Midwest is to identify, maintain, and restore the large tracts that are mostly likely to be populations sources. Further loss or fragmentation of habitats could lead to a collapse of regional populations of some forest birds. Land managers should seek to minimize cowbird foraging opportunities within large, unfragmented sited.”</p> <p>(Robinson, Scott & R. Thompson, Frank & Donovan, Therese & R. Whitehead, Donald & Faaborg, John. (1995). Regional Forest Fragmentation and the Nesting Success of Migratory Birds. Science (New York, N.Y.). 267. 1987-90. 10.1126/science.267.5206.1987.)</p> <p>While it is true that cutting mature forest and thus introducing very young forests would result in an increase in diversity of habitat and thus bird species, this is only true if one considers the national forest in a vacuum. In fact, the forest is surrounded by young forest. Young forest is not in short supply in the area. Therefore, the notion that a mature forest must be cut down to provide this type of young forest diversity is wrong-headed and is an indication of the tunnel vision on the part of the Forest Service. Sadly, despite nearly 100 years since the phrase “ecology” was first coined the agency still equates the its stated goal of</p>	<p>Vegetation management to improve forest structure and age class is not the same as fragmentation. Forest fragmentation is a process in which the landscape by which forest lands are broken up into smaller, isolated patches of forest surrounded by developed land uses such as urban development or agriculture (Crocker et al. 2017).</p> <p>Habitat Fragmentation was analyzed in the Forest Plan Final EIS, p. 3-89 (USDA FS 2006b).</p> <p>Cowbird analysis can be found in the Forest Plan EIS pp. 3-90, 3-95, 3-98 (USDA FS 2006b).</p> <p>Birds on the Regional Foresters sensitive species were analyzed in a biological evaluation and summarized in the EA.</p> <p>King and Schlossberg (2013) state, “The presence of agricultural and residential development within the landscape can negatively affect birds through nest predation and parasitism (Robinson et al., 1995); however, these threats are not typical of extensively forested (~70%) landscapes (Hunter et al., 2001).”</p> <p>The project area would remain forested, with a diversity of age class.</p> <p>The Forest Plan EIS. “Private landowners adjacent to the Forest generally treat their land with a diameter limit harvest. Private landowners generally do not harvest and convert their pine stands to native hardwood or use prescribed burning to alter the forest floor condition. As a result, private land provides very little early successional habitat and little treatment that could perpetuate the oak-hickory component” (USDA FS 2006b p. 3-179).</p>
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		protecting the health of the forest with assuring maximization of timber output.	
46-13	Tom Zeller 8/26/2019	<p>The actions proposed for the Houston South Vegetation Management and Restoration Project would have a negative impact on recreational use of the area. The over-management prescribed would result in numerous trail closures. As the general public does not follow the Forest Service activities closely, most recreationalists will plan an event and travel to a site only to find it is unavailable. This would not only represent a one-time lost opportunity, but also discourage future visits to the forest.</p> <p>Soil erosion from the intense management prescribed could have an impact on recreation on Lake Monroe. Already shallow bays are noticeably silting in and being clogged with invasive water plants. The additional silt load from burning and timbering will only exacerbate these problems. Fishing is a major recreational activity on Lake Monroe. The Forest Service has not performed baseline monitoring of soil erosion from its land and is not in a position to estimate the amount likely to result from these management activities. It therefore cannot state with any certainty the impact on fish nesting and resulting effects on fishing recreation on the Lake.</p> <p>The value of the Hoosier National Forest as an outdoor activity tourist magnet far exceeds its value as a tree farm. About a million people live within a day-trip's drive to the forest. Expenditures for meals, lodging, gasoline, gear, and incidentals that result from visits to Lake Monroe generates more than \$20 million per year in tourism annually, according to the Corps of Engineers.</p>	<p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>The impact on soil and water was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p>
46-14	Tom Zeller 8/26/2019	<p>I see three fundamental flaws in the worldview of the Forest Service.</p> <p>First, the Forest Service doesn't seem to be able to see the forest for the trees. Since its inception it has</p>	Comment noted.

		<p>focused on maximizing timber production, and despite decades of increasing ecological awareness the agency's proposal would be unchanged if that were the only goal. The prescription hasn't changed, only the agency has learned to dress its underlying motivation in the sheep's clothing of science and claimed ecological necessity</p> <p>Secondly, the Forest Service does not seem to recognize that every disruption to the forest has an ecological cost. An activity designed to benefit one aspect of the forest inevitably damages another aspect. The aspects of the ecological system of the forest beyond timber production and perhaps maximizing game, go unnoticed and unvalued by the Forest Service.</p> <p>Finally, the Forest Service fails to recognize the value of natural forest processes. Beyond the strictly hands-off nature of an official wilderness, a forest can be actively but lightly managed. Unfortunately, the incentives in the bureaucracy all reward more disruptive management. Fish gotta swim, birds gotta fly, foresters gotta harvest.</p> <p>The stated mission of the Forest Service is to "sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations." I do not believe the proposed project plan rises to that standard.</p>	
47	Richard Harris 8/26/2019 (PR bb50)	<p>I have two primary concerns about the project:</p> <ol style="list-style-type: none"> 1. Detrimental effects on the water quality of Lake Monroe due to soil disturbances from "management" activities. 2. Detrimental effects on recreation and aesthetics from timber management. 	<p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>The impact on soil and water was analyzed in the Report for the <i>Houston South Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p>
47-2	Richard Harris 8/26/2019	The draft Environmental Assessment acknowledges that "there are inherent risks to soil and water resources just by removing trees". Lake Monroe is	<p>Please see response to comment 47 above.</p> <p>Please see response to comment 29-5.</p>

		already impaired by excess nutrient and sediment loading, and has been subjected to several years of recreational advisories by the Indiana Department of Environmental Management due to the presence of blue-green algae. The Forest Service has responded to previous comments by saying that no detrimental effects on water quality are anticipated from the proposed activities. It should be noted that sediment and nutrient loading to Lake Monroe are cumulative, and ANY increase is unacceptable. This issue remains unresolved, particularly in light of increased future rain events due to climate change, which was not assessed in the EA.	
47-3	Richard Harris 8/26/2019	I am a frequent recreator in the HNF, and have hiked in the Hickory Ridge and Fork Ridge Trail areas that are within the project area. Several miles of these trail systems would be impacted by this project, and will take years, if not decades, to recover. Some will lose their primitive nature due to installing logging roads and will never recover.	Comment noted.
48	Steven Higgs 8/22/2019 (PR bb51)	I hear a lot of debate about native Americans burning the HNF lands and wondered if you could please let me know what evidence there is that they did. I know they burned south of Indiana, in Kentucky or Tennessee (?). I've seen some indications they burned in the valleys in Indiana for ag, but I've not seen anything re the uplands.	There are at least five reference materials in the project record about this issue. Please see response to comment 46-9.
49	Carrie Wild 8/26/2019 (PR bb52)	I am writing in support of the protection of Lake Monroe and our Hoosier forests by rejecting the proposed Houston South Logging Project near Lake Monroe. The lake should not be put at risk for further contamination due to run-off caused by logging, and local wildlife and migrating birds deserve our protection as well.	Comment noted.
49-2	Carrie Wild 8/26/2019	As the Amazon rainforest currently burns, it's time to accept the ramifications of climate change across the board and preserve our forests whenever we can. We do not need the loss of more trees in Hoosier forests and all the other terrible losses to habitat and human and animal well-being that that would entail.	Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.

50	Mary Kay Rothert 8/23/2019 (PR bb53)	I have found the draft EA to be unresponsive to the concerns I raised during scoping.	Comment noted.
50-2	Mary Kay Rothert 8/23/2019	...believe the proposed management to be non-prescriptive for the 2.8 areas...	Comment noted.
50-3	Mary Kay Rothert 8/23/2019	Newer studies and data are not used in the draft EA. Current conditions are ignored, The increasing loss of wildlife species such as ground-nesting or neotropical migrant birds and bats are disregarded as insignificant. There is no scientific inventory of the wildlife in the area.	The effects to wildlife on the Regional Foresters sensitive species list were analyzed in the Biological Evaluation for Regional Foresters Sensitive Species and summarized in the EA. The effects to endangered and threatened species were analyzed in the Biological Evaluation for Threatened and Endangered Species and summarized in the EA. For migratory birds, see response #18-15.
50-4	Mary Kay Rothert 8/23/2019	Having stood in knee-high erosion gullies in HNF timbered land of slighter slope than is expected here, I cannot credit Best Management Practices to be fully successful in mitigating soil erosion or the transfer of chemicals into the lake. Lake Monroe is known to have serious threats to its longevity from both silting and the increasing chemical-laden sediment load, causing increasing algae growth. The HNF does not monitor the level necessary to protect the lake, given its past actions and current staffing levels. The proposed project is in the Lake Monroe watershed.	Trained timber sale contract administration personnel make regular inspections of harvesting operations to ensure successful implementation and effectiveness of BMPs. Herbicide use for site preparation and stand improvement activities was analyzed as an issue in the EA pp. 34 - 39.
50-5	Mary Kay Rothert 8/23/2019	The substantial use of herbicides, including the suspect glyphosates, to mitigate the increase of invasive species and to create the stated "park-like" setting is counter to the requirements of 2.8 areas and may be damaging to Lake Monroe and living things on the land. It should be avoided until future study determines these chemicals to be safe. The project should be terminated.	Please see response to comment 29-3.
51	Tomilea Allison 8/20/2019 (PR bb54)	After reading the article in the Herald Times, it seems to me that risking the water supply of Monroe County to assist nature by planting trees seems to be an unnecessary risk.	The guest column article in the Herald Times titled <i>What's wrong with the Hoosier National Forest plan?</i> by Tom Zeller and Mary Kay Rothert was an opinion piece. Please review our Environmental Assessment and supporting documents at: https://www.fs.usda.gov/project/?project=55119 .

51-2	Tomilea Allison 8/20/2019	Run-off and sediment is already endangering our water supply from Lake Monroe. Please do not do anything in the watershed that has even a little risk.	Please see response to comment 51 above.
52	Douglas Paprocki 8/26/2019 (PR bb55)	I would request that there be enhanced watershed protection in this project for watercourses entering Lake Monroe. While agriculture is certainly the main nutrient-loading source, no National Forest project should add anything to that pollution problem.	The ID team incorporated management requirements and design measures in the project design to reduce any potential negative impacts to soil and water resources (EA, Appendix A). The Houston South project incorporates all relevant Forest Plan standards and guidelines as well as Indiana Best Management Practices.
53	Ann Deutch 8/26/2019 (PR bb56)	Each comment below describes data missing from the EA analysis that should be considered. Consideration of these data leads to conclusions with respect to foreseeable impacts of the proposed action that are different (at various scales) from the conclusions presented in the EA. Further analysis is required.	Comment noted.
53-2	Ann Deutch 8/26/2019	<p>Erosion:</p> <p>Impacts of soil disturbance are very different on different slopes, different soil types, different existing vegetation, timing of heavy rain events, etc. For example, the USDA categorizes soils with severe or very severe risk of erosion from logging. Soils in this category within the Houston South Project area include Brownstown channery silt loam, 25 to 75 percent slopes (BvmG), Gnawbone silt loam, 25 to 55 percent slopes (GmrF), and Brownstown-Gilwood silt loams, 25 to 75 percent slopes (BvoG). The EA description of erosion prevention or mitigation measures never identified the importance of soil type as a site-specific erosion risk factor.</p> <p>The EA failed to analyze the potential impacts of the increasing trend towards more extreme rain events. Six scoping commenters provided information about extremely heavy rains, increased frequency of rain, or higher rainfall totals. The EA did not adequately address these scoping comments.</p>	<p>Site-specific soil and water effects were analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>Additional information was added to the final EA (pp. 21-23).</p> <p>During timber sales, the timber sale administrator monitors the weather forecast and applies protection measures to exposed soil. Sale administration personnel designate waterbar locations for the purchaser to install as a regular function of sale administration. Prior to any forecasted heavy rains or shutdowns for the winter, sale administration staff work with the purchaser to make sure erosion control work like waterbars, backblading, and removal of any logs or culverts used in stream crossings. The timber sale contract requires to timber purchaser to create a receptive seedbed on areas of disturbed soil to seed skid trails and seed/straw landings to revegetate the sale.</p> <p>Timber operations cease during heavy rain events and remain stopped until ground conditions have improved.</p>

			<p>Trained timber sale contract administration personnel make regular inspections of harvesting operations to ensure successful implementation and effectiveness of BMPs. These inspections would occur after every heavy rain event.</p> <p>The Forest has two employees that perform sale administration, plus two more harvest Inspectors that have contract authority. In addition, the engineering technician has contract authority on roads. That is 5 on-the-ground personnel with contract authority, plus the Contracting Officer overseeing the contract that are monitoring ground conditions.</p>
53-3	Ann Deutch 8/26/2019	<p>Recreation:</p> <p>The timeframe of consideration for effects to recreation is incorrect. After the 12-15 year period analyzed in the EA, the proposed vegetation management actions would still be obvious to forest users. As the EA stated, some would find these impacts beneficial (i.e. those who want to see or hunt turkeys) and some would find it adverse (i.e. those who want a deep woods experience). It is important to quantify these foreseeable impacts rather than simply describe them. Public opinion as expressed in scoping comments for this EA, in recent comments on state forest logging plans, and in the state legislature all make it clear that the potential impacts would be adverse for many people. (see Visual Quality and Social Impacts in this comment)</p> <p>The Draft EA states that burn units typically impact recreation for only a day or two, with trail closures occurring up to five days depending on unit conditions following the burn. On the contrary, prescribed burns adversely impact the recreational experience for a longer period of time, as long as charred fuels, dead trees and saplings and fire-related regrowth is in evidence. A prescribed burn's impacts are perceivable long after one or two days. This kind of over-</p>	<p>The Forest Plan EIS has analyzed the effects of management on visual landscapes on pp. 3-240 to 3-245. This EA is tiered to that EIS.</p> <p>40 CFR 1502.20 states, "Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§1508.28)."</p> <p>This project incorporates direction from the Forest Plan and represents site-specific, project level planning necessary to implement Forest Plan. According to the Forest Plan, the project area has a visual quality objective (VQO) of Modification.</p> <p>The draft EA stated, "The timeframe of consideration for effects to recreation from prescribed burning is 20 years, however burn units typically impact recreation for only a day or two, with trail closures occurring up to five days depending on unit conditions following the burn" (p 29).</p>

		simplification makes me wary about accepting the conclusions of the EA in general.	
53-4	Ann Deutch 8/26/2019	<p>Regeneration of Oak and Hickory:</p> <p>It is my understanding that similar Oak regeneration efforts undertaken by the State of Indiana in nearby forests over the last 15 years have not resulted in much oak and hickory regeneration if any. Specific and detailed data regarding nearby efforts should have been presented and analyzed in the Draft EA. The Draft EA explains that proposed action will have a “long term benefit of ... regeneration of oak and hickory trees”. The successes or failures of the Indiana Division of Forestry should be analyzed to evaluate whether the proposed methods would likely be locally effective.</p>	<p>The project’s Silviculture Report states, “Well-designed harvests using group selection, shelterwood, clearcutting, and other silvicultural methods can create the proper conditions needed to regenerate oak (Dey 2014, Wagner et al. 2018). Prescribed fire has also been repeatedly shown to be an effective tool for regenerating oak (Abrams 1992, Dey 2014, Wagner et al. 2018). Different combinations of these treatments will be utilized in the Houston South Project” (Swaim 2019).</p> <p>See response to comment 73-5.</p>
53-5	Ann Deutch 8/26/2019	<p>Range of Alternatives:</p> <p>The Draft EA failed to present a reasonable range of alternatives. Scoping comments were more than sufficient to guide crafting of additional alternatives.</p> <p>There is no discussion in the EA about the criteria used to select the Houston South Area as the vegetation management area out of the entire 2.8 area in the Forest or on the Brownstown District. Other portions of the 2.8 area, especially those outside the Lake Monroe watershed or those containing fewer hiking trails could have been considered as alternatives to the preferred alternative.</p> <p>An alternative could have made watershed protection the first priority. Under this alternative, activities with risk of causing erosion including but not limited to logging, mechanized travel, water dispersion outflows, prescribed burns, and crop release would not occur on slopes greater than 35% or on any soils defined by the USDA to have a severe or very severe risk of erosion. There would be no soil-disturbing activities within riparian corridors. Merely including watershed</p>	<p>Forest Service NEPA regulations (36 C.F.R. 220.7 (b)(2)) state: “The Environmental Assessment (EA) shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.”</p> <p>The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age. Other areas in Management Area 2.8 are likely to be considered in the future.</p> <p>Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives.</p> <p>36 C.F.R. 220.7 (b)(2)(i)) states, “When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives.”</p> <p>Differing opinions do not indicate unresolved issues. Issues were analyzed in the EA. This project is</p>

		<p>protection as one of eight goals in the Forest Plan is not sufficient for this proposed alternative.</p> <p>An alternative could have made non-consumptive recreation the first priority. Vegetation treatments would be restricted to areas that could be accessed without disturbance to existing hiking or horse trails. This alternative might require choosing a location in Management Area 2.8 that is outside the proposed Houston South Project Area and remote from existing hiking and horse trails.</p>	<p>consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. The concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
53-6	Ann Deutch 8/26/2019	<p>Watershed concerns:</p> <p>Many scoping comments expressed concerns about the watershed(s) that drain into Monroe Lake, the drinking water source for Bloomington. The EA dismissed these concerns with reference to BMPs and water quality monitoring. Please see my comments about erosion, rainfall patterns, and public opinions. Foresters in training are always told to provide assistance to the landowner. The landowner makes the final decisions; the forester is not the landowner. The public owns their National Forests. The Purpose for the Action proposed in the EA could be accomplished outside these watersheds as the public has requested.</p>	<p>This project is consistent with and implements the Hoosier National Forest Land and Resource Management Plan. The Forest Plan, with extensive public input, made the decision.</p> <p>Please see response to comment 53-2.</p>
53-7	Ann Deutch 8/26/2019	<p>Visual Quality -- need to update Social Impacts:</p> <p>The Draft EA says that Forest visitors using trails in the project area and travelers along associated roads bordering the project would see a landscape with a more open appearance in areas, rather than stands of trees throughout. This would be a dramatic long term change in Visual Quality. Although it would be consistent with the Visual Quality Objectives identified in the 2006 Forest Plan, the FEIS analysis that led to establishing these goals is severely outdated. The FEIS Social Impacts analysis included characterization of public opinion. That research data was collected in</p>	<p>The Visual Quality Objectives identified in the 2006 Forest Plan were not developed from FEIS analysis. The FEIS states, "Discussion occurred about reevaluating the scenery management system prior to initial scoping for Forest Plan revision. Since no one has demonstrated an overriding need to change the existing system of managing Visual Quality Objectives (VQO), the Forest will maintain the VQO system and considered it throughout this analysis." (p.1-7)</p> <p>Some changes were made to VQO classification for all alternatives in the FEIS, but those changes were not based on public opinion (p. 2-25).</p>

		<p>2000 (Welch et.al. 2001) and does not accurately represent public opinion in 2019.</p> <p>First, the selected respondents did not represent the public at large. The analysis did not characterize what proportion of the public was liable to prefer various forest service actions. Minority and majority views were given equal weight. This approach gives little guidance regarding proper decision-making that keeps the landowners' (the public's) preferences in mind.</p> <p>Second, public opinion about management of public forests has changed over recent years. More people are adamant about wanting the visual quality associated with a mature closed canopy forest. For example, recent State Forest logging programs have drawn protests and many opposing comments. Bills introduced to the Indiana state legislature calling for less logging on state forests have received public support.</p> <p>In addition, the old FEIS analysis failed to include the existence value of mature forest. Existence value is a term used by social scientists to mean value to people in general, including people who will never (or like me, never again) personally experience the resources in the deep mature forest. "The knowledge that the forest is there and that natural wild places are preserved and available is important to many people, whether or not they ever visit the Hoosier." (Forest Plan 2006)</p> <p>The EA only identified short term impacts during actual silvicultural treatments and prescribed burns. However, Visual Quality impacts would be long term. This mistake is similar to what I experienced 30 years ago when a road's banks near my house were cleared and we were told "in a couple of years you won't even notice". I still notice. I still prefer the visual quality of the narrow roadway closer to my house.</p>	<p>Please also see response to comment 53-3.</p>
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53-8	Ann Deutch 8/26/2019	<p>Sensitive Species-- Ruffed Grouse, Cerulean Warbler</p> <p>The Audubon Society's evaluation of the effect of climate change on Ruffed Grouse and Cerulean Warbler can be accessed at https://climate.audubon.org/birds/rufgro/ruffed-grouse and https://climate.audubon.org/birds/cerwar/cerulean-warbler The data underlying these maps was not discussed in the BE or in the EA. These maps show habitat changes due to climate disruption. Attempts at habitat improvements in Indiana have little chance of attracting Ruffed Grouse or Cerulean Warblers in the long term. This is especially the case because "population levels have likely dropped below "minimal viable population levels" within most of the current grouse range in Indiana." (Backs, S. 2018. Breeding Indices of Ruffed Grouse – Spring 2018. Indiana Department of Natural Resources, Division of Fish & Wildlife. Wildlife Management and Research Notes. 5p.).</p>	<p>The project proposes to promote regeneration of oak and hickory habitat and increase the amount of early successional habitat available. The hard-mast provided by oak-hickory species provides crucial food sources for a wide array of wildlife and creating early successional habitat would benefit a wide variety of songbirds.</p> <p>The purpose of the Regional Forester Sensitive Species BE is to document the potential effects of implementing the proposed Houston South Vegetation Management and Restoration Project on those species and the habitats they may occupy.</p> <p>For the Ruffed Grouse, the BE determined a beneficial effect but acknowledged the potential for population recovery is not good.</p> <p>The BE determined project activities "may impact" the cerulean warbler and its habitat, but there should be no trend toward federal listing. The BE noted that Cerulean Warblers were not detected in the 2017 Breeding Bird Survey.</p> <p>Climate change data for these two species would not have changed the determinations.</p>
54	Kalynn Huffman Brower 8/26/2019 (PR bb57)	I strenuously object to logging in the Hoosier National Forest where activities will directly affect the watershed of Lake Monroe and local drinking water.	Comment noted.
54-2	Kalynn Huffman Brower 8/26/2019	<p>Lake Monroe water has been under threat for the better part of a decade. Significant logging in the proposed area would put the environment at even more risk. The affects of the proposed management plan include, but are not limited to:</p> <ul style="list-style-type: none"> increased soil erosion and movement due to road construction, leading to rise of algae blooms in the water; 	Please see response to comment 29-3 and 29-4.

		<ul style="list-style-type: none"> the loss of vegetation and habitat threatens wildlife, including migratory birds and Indiana bats loss to the local economy from horse riders, hikers, primitive campers, businesses and others due to years of trail closures, including the Knobstone Trail; and in the face of worldwide climate disruption, logging would result in the loss of carbon-sequestering trees 	
54-3	Kalynn Huffman Brower 8/26/2019	This proposed plan goes in the wrong direction, exactly against what ecologists and naturalists outline as necessary steps for protecting and restoring our national forests.	Comment noted.
55	Gillian Harris 8/26/2019 (PR bb58)	<p>I attended the open house at the Monroe County Library and appreciated the opportunity to talk with people about the proposed projects. Unfortunately it confirmed my fears about new roads built into the forest and old roads "improved" for access to areas slated for logging and carrying the heavy trucks and other machinery necessary for the extraction of logs</p> <p>After all the logging in the state forests and seeing trails that were once narrow footpaths through the woods turned into broad graveled roads overlooking clearcuts and streambeds full of gravel, with the spread of invasives like stilt grass and vinca exacerbated, I must voice my opposition to the plan to log our national forests.</p>	Comment noted.
56	Hudnall A. Pfeiffer 8/26/2019 (PR bb59)	I am writing to oppose the referenced project and in particular the clear cutting that could impact Salt Creek and Lake Monroe. I am a Hoosier with a home near Lake Monroe. But even if I didn't own the home there, I still would oppose this. We all know clear-cutting has adverse effects on many things and here, in addition to others negatives, it will jeopardize the water supply. Why do that? Selective harvesting of trees, while perhaps not as easy or lucrative, is better. Please take the smart path and not just the easy, most lucrative	Clearcuts are a small percentage of the proposed silvicultural treatments, 401 acres. Clearcut are proposed to remove nonnative pine stands. Converting pine plantations to native hardwoods is a goal stated in the Forest Plan.

		path. It is time to put the environment and our long term interests ahead of short term monetary gains.	
57	Joni Colyer 8/26/2019 (PR bb75)	I ma against the Houston South Logging Project in the Hoosier Natl. Forest. For reasons see link below-- https://indianaforestalliance.org/houstonsouth-8-26/	Comment noted.
58	Terry Marbach 8/26/2019 (PR bb60)	As a grandparent and as an owner of the Hoosier Natl Forest, I urge the Forest Service to take this logging plan "off the table". If carried out it will: <ul style="list-style-type: none"> • Pollute the water supply for thousands of people • Negatively impact use of the forest for recreational purposes • Contribute to global warming- the most important negative facing our world (and our grandchildren) • Make Lake Monroe unattractive for recreational purposes (known as algae blooms). 	Please see response to comment 29-3 and 29-4.
58-2	Terry Marbach 8/26/2019	The Forest Service has failed to provide any valid reasons for "why this project".	Please refer to the purpose and need in the Environmental Assessment on pp. 7 - 9.
58-3	Terry Marbach 8/26/2019	If this plan is carried out I'll take my recreational dollars to other states or countries where forests are more protected.	Comment noted.
59	John DiTillo 8/26/2019 (PR bb76)	I can appreciate a project that will create revenue for aquatic organism passages, establish trails in preferred locations, or to restore forests to a more durable, natural condition. I cannot, however, endorse any project that involves clear-cutting. In no way is this a sound ecological or forestry practice. Clear-cuts devastate landscapes in many ways, the most significant of which is soil erosion. You'll poison the watershed, and you know it.	Please see response to comment 56. <i>Site-specific soil and water effects were analyzed in the Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water and summarized in the EA.</i>
59-2	John DiTillo 8/26/2019	I am hoping that Indiana will be a place worth living when my children's turn comes to raise their families. If you use inherently violent and destructive methods to "harvest" or "establish healthy" forests -- I am talking about clear-cuts here -- which are also unscientific and outmoded, you are doing the wrong thing.	The National Forests Management Act (NFMA) of 1976, 16 U.S.C. 1600 allows for the consideration of clearcutting as a silvicultural treatment in the development of land management plans (NFMA, Section 6(g)(F)(i)). The Hoosier National Forest Land and Resource Management Plan includes the clearcut method as a viable option to achieve resource goals and

			objectives under certain conditions (Forest Plan, page 1-7).
59-3	John DiTillo 8/26/2019	It is time to learn from our mistakes and use appropriate technologies on scales that actually support the health of communities and the watersheds they inhabit. Clear-cutting, in any way, undermines the health of forests, watersheds, and communities.	Please see response to comment 56 and 59-2.
59-4	John DiTillo 8/26/2019	Please learn from past mistakes and find an appropriate way to remove invasive species and restores the forests to health. There are people all over the world turning away from mindless, destructive mechanized methods and toward sustainable ways of doing this. Why don't we here in Indiana do the same?	Comment noted
60	Bowden Quinn 8/26/2019 (PR bb61)	The Sierra Club Hoosier Chapter opposes the proposed Houston South project because of the adverse impact it will have on the critical need we have as a nation and a world to reduce carbon emissions due to the climate crisis that threatens to cause devastating impacts to both human and natural ecosystems in the near future (www.ipcc.ch/sr15/).	Comment noted
60-2	Bowden Quinn 8/26/2019	In view of the current Federal Administration's dismissal of the scientific consensus on the validity of climate change, we appreciate the discussion of the project's potential impact on global heating in the Environmental Assessment (EA), Issues 11 and 12, but it is totally inadequate in light of recent warnings about how swiftly the climate crisis is approaching. Notably, the EA's list of references includes publications of the Intergovernmental Panel on Climate Change (IPCC) in the years 2000, 2013, and 2014, but doesn't list the IPCC 2018 Special Report (report.ipcc.ch/sr15/pdf/sr15_spm.final.pdf), which we referenced in our scoping comment letter sent on December 24, 2018.	<p>The commenter's scoping response stated, "In a recently released report, the Intergovernmental Panel on Climate Change issued a dire warning that over the next twelve years the world must drastically reduce the amount of greenhouse gases that it emits into the atmosphere or it will suffer economically devastating impacts caused by increased droughts, floods, severe storms, wildfires, and the spread of disease and pests that will significantly reduce agricultural productivity. In view of the gravity of this warning, it is incumbent on any government agency to analyze the potential for a proposed action to increase or decrease carbon emissions."</p> <p>Site-specific carbon and greenhouse gas emissions were analyzed in the Project Scale Carbon Effects – Houston South Project Environmental Assessment and summarized in the EA. The analysis found that the proposed action is consistent with internationally recognized climate change adaptation and mitigation practices.</p>

60-3	Bowden Quinn 8/26/2019	<p>In its Summary for Policymakers of the Special Report, (www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1.5c-approved-by-governments/) the co-chair of IPCC Working Group II is quoted as saying "Every extra bit of warming matters, especially since warming of 1.5 degrees C or higher increases the risk associated with long-lasting or irreversible changes, such as the loss of some ecosystems." This statement clearly shows the inadequacy of the EA conclusions in its paragraphs on the cumulative effects of the project on carbon emissions (pp. 53-58) that the carbon enhancing aspects of the project would be negligible and would eventually be mitigated by forest regrowth. We don't have the luxury of waiting 20 or 30 years for the forest to restore the carbon lost by the project. The IPCC Special Report said that we need to achieve net zero carbon dioxide emissions in less than 15 years in order to have a reasonable chance of maintaining a world capable of sustaining our current civilizations (www.ipcc.ch/sr15/).</p> <p>"The next few years are probably the most important in our history," according to Debra Roberts, co-chair of an IPCC working group.</p>	See response to comment 60-2 above.
60-4	Bowden Quinn 8/26/2019	The Sierra Club recently released a study of the effects of logging on carbon emissions (see link on our website, sierra.org/Indiana), which calls for a forest carbon trust that would promote carbon storage in our publicly owned forests. As a nation, we need to end the use of forest products, find alternatives that don't add to carbon emissions, promote our public forests as lands where we can all reconnect with nature, and work for increased tree plantings in areas now denuded of the forests that once occupied them.	Our Houston South analysis modeled data on the Hoosier and in the Houston South project. Our model showed the Hoosier becoming carbon neutral and perhaps even a carbon source if no management occurs. Please refer to <i>Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region</i> at: https://www.fs.usda.gov/nfs/11558/www/nepa/110474_F_SPLT3_4670167.pdf
60-5	Bowden Quinn 8/26/2019	While there are aspects of the proposed project that we support, specifically the aquatic organism passages, decommissioning of forest roads, and the installation of vernal pools, overall we favor abandoning the project, not replacing it with another	Comment noted.

		project that would require tree removal, and instead focusing on the recreational enjoyment of the forest as it is and as it will grow to be.	
61	Samuel F. LaBudde 8/26/2019 (PR bb62)	<p>The draft Houston South Vegetation Management and Restoration Project is an unscientific attempt to justify habitat destruction within the Hoosier National Forest (HNF) under the disingenuous guise of forest ‘management’. Indeed the very first sentence of the document is illustrative of multiple fallacies and flaws inherent in the proposal and by extension the outdated mindset employed by the USFS in its continuing assault on public lands.</p> <p>“We are proposing to treat vegetation and conduct related management activities improving forest health and sustainability of the oak-hickory ecosystems while also improving wildlife habitat.”</p> <p>“Treat” specifically refers to killing vegetation with fire, herbicide and through removal/logging; “related ‘management’ activities” are primarily aimed at mitigating the onerous and widespread impacts of building and/or reconstructing over 15 miles of logging roads and otherwise ameliorating the certain negative effects of this and other commercial logging-related activities on soil, watersheds and native flora and fauna; “forest health” as cited is the preposterously narrow, irrational and unsupportable notion that the target ecosystem will on the whole benefit from thinning older mature trees to better allow for succession by more commercially viable oak/hickory species; and, “improving wildlife habitat” is a transparent fallacy that masks the steady decrease in biodiversity within habitats repeatedly subjected to logging and other modern “best management practices” (BMP) as employed by the USFS, BLM and within Indiana by the Department of Natural Resources (DNR).</p>	Houston South Vegetation Management and Restoration Project is consistent with and implements the Forest Plan.
61-2	Samuel F. LaBudde	An extraordinary amount of effort has been invested by special interests and their academic proxies to create	Thank you for your comment.

	8/26/2019	a rationale for “managing” American forests. As the resulting model for ‘resource management’ has largely been predicated on ‘forest health’ and ‘premium board feet’ being synonymous, state and federal justifications for ‘forest management’ are almost invariably products of shoddy science, selective and specious conclusions drawn from historic records, and a general reliance on finding/manufacturing ‘facts’ to support the desired conclusion/action, in this case that American forests - already compromised by generations of logging, grazing, burning and other human activities - in anyway benefit from and are needful of human ‘management’ as practiced in relation to commercial logging. While this may be the case with respect to nurturing and restoring endangered species, removing invasives and otherwise restoring integrity to watersheds, actual ‘best management practice’ in this case and many others is to allow forests to ‘manage’ themselves as they did quite successfully for millennia prior to modern human intervention.	
61-3	Samuel F. LaBudde 8/26/2019	The premise/contention that subjecting forests to fires, pesticide and heavy equipment is in the best interests of the public and the Houston South tract/HNF ecosystem is absurd. While justification may exist for removal of the 500 acres of human introduced stands of pine within the area, the other proposed activities will accomplish little of value beyond preparing the area for future incursions by commercial logging interests. Given that over 95% of logging in Indiana and the Midwest region occurs on private lands and in light of the fact that there is no true oldgrowth or climax forest anywhere in the state, the best interests of the public and the larger Midwest ecosystem will be served by immunizing the Houston South area and Hoosier National Forest from any and all ‘management practices’ designed to ensure ‘forest health’ through removal of mature hardwoods in service to commercial logging interests.	Please see response to comment 61.
61-4	Samuel F. LaBudde	The ‘optimum’ species composition envisioned by NFS constituting predominantly oak/hickory forest is and/or	The Forest Plan EIS states, “Private landowners adjacent to the Forest generally treat their land with a

	8/26/2019	<p>should be precisely what exists on the collectively much larger area of private tracts in Indiana that are routinely logged. Insofar as these areas represent the vast majority of forest lands in the region, there is zero chance that a failure to 'manage' hardwood species composition within HNF will in any way compromise greater ecosystem health or biodiversity within the region. On the contrary, the real threat to ecosystem health and biodiversity is the total absence of any real climax/ancient forest and the wholesale loss of habitat that is essential to species that rely upon them for survival. As a 'national' forest, HNF should be no longer be subject to commercial logging in any form - it should rather be recognized as the last best hope for restoring a very small part of the climax native forest ecosystem that once dominated the eastern continental US and that now exists as little more than memory. Any prospect that exists for reconstituting America's ancient forest decreases in direct correlation to the USFS continuing to facilitate logging on public lands,</p>	<p>diameter limit harvest. Private landowners generally do not harvest and convert their pine stands to native hardwood, or use prescribed burning to alter the forest floor condition. As a result, private land provides very little early successional habitat and little treatment that could perpetuate the oak-hickory component" (USDA FS 2006b p. 3-179).</p> <p>The Forest Plan EIS Page 3-99 shows that under the selected alternative (of the EIS), 81% of the Hoosier will be mature hardwood.</p> <p>Houston South Vegetation Management and Restoration Project is consistent with and implements the Forest Plan.</p>
61-5	Samuel F. LaBudde 8/26/2019	<p>As less than 1% of land in the state of Indiana, and as perhaps the most ecologically robust/intact remnants of Indiana's once vast hardwood forest, HNF should be set aside as wilderness area, especially in light of the rapacious policies being employed by the Indiana DNR on the State's meager 150,000 acres of public forest land. Indiana is by no stretch of the imagination lacking in land that has been managed to favor and maximize oak-hickory woodland - what the state and the region are wholly lacking is true climax forest habitat and the unique aesthetic and ecological bounty that accompanies same.</p>	Comment noted.
62	<u>MCC</u> Penny Githens, Lee Jones, and Julie Thomas MCEC	<p>Thank you for your previous responses to our questions and for hosting an open house earlier in the month so that the community could engage with so many of your scientists to voice their questions and concerns about the proposed Houston South project. While the open house was appreciated and helpful, we</p>	Comment noted.

	Dave Simcox and Dave Warren 8/26/2019 (PR bb63)	still have some serious concerns about the proposed project's potential impact on Lake Monroe.	
62-2	MCC/MCEC 8/26/2019	First, we remain unsatisfied with the responses provided by HNF so far regarding estimated impacts on Lake Monroe. The lake is already listed by EPA as an impaired reservoir due to algae caused by sedimentation and other factors. And algae in the lake continues to concern the U.S. Army Corps of Engineers and IDEM. Further degradation of the lake's water quality also puts pressure on City of Bloomington Utilities from a water treatment perspective, given that Lake Monroe provides drinking water for the entire city of Bloomington as well as tens of thousands of people in the county. HNF previously responded to a question about the sedimentation potential of Houston South project activities by simply referring to a USACE document about algae being caused primarily by sunlight, warm temperatures, low-water or low-flow conditions, and excessive nutrients. They went on to say that most nutrient pollution is the result of agricultural runoff, lawn fertilizer, and untreated sewage. But the response ignored how logging on 4,000 acres and road building, prescribed burns, and other activities on 10,000 acres of land will contribute to sedimentation in the watershed. The Lake Monroe watershed is heavily forested, yet still suffers from algae contamination. We would like HNF to provide more information on why the agency does not believe the Houston South project will exacerbate existing sedimentation problems.	The impact on soil and water was analyzed in the Report for the <i>Houston South Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.
62-3	MCC/MCEC 8/26/2019	Second, while the environmental assessment claims no significant impacts, we have not seen much evidence that supports such claims. As such, we would appreciate seeing the results of any modeling or ex-ante evaluations of how various Houston South project activities are expected to impact Lake Monroe. When Congress proposes a new law, the	See response to comment 62-2 above. All specialist reports, biological evaluations, public correspondence, maps, and environmental documents are posted to the project's website at: https://www.fs.usda.gov/project/?project=55119

		<p>Congressional Budget Office produces estimates of the effects of that law using statistical models and other tools. These results are then communicated to lawmakers and the public. During HNF's process regarding the Houston South project, however, the public is not able to examine the different outputs used by the Forest Service in forming their decisions about activities and impacts. We therefore would like to request that more internal decision-making analyses regarding the Houston South project be made publicly available.</p>	
62-4	MCC/MCEC 8/26/2019	<p>Third, we continue to fear that Lake Monroe was an afterthought in the development of the Houston South proposal. Part of this fear stems from the fact that there are other locations within HNF that are appropriate for logging but that are not in the watershed of a municipal surface drinking water supply. One would hope that the Forest Service uses a precautionary approach when it comes to determining whether or not to operate in a sensitive watershed, particularly when alternative locations are viable. Another part of our worry comes from an HNF response in which HNF stated that the Houston South project is not located in the Lake Monroe watershed. Now, it is true that the project is located within a sub-unit of the watershed, but that sub-unit is indeed located fully within the Lake Monroe watershed. For the HNF to suggest in a written response that the proposed Houston South project is not in the Lake Monroe watershed is a red flag that suggests some decision-makers at HNF may not have factored in the potential impact on Lake Monroe in their analysis.</p>	<p>This project is consistent with and implements the Forest Plan's Desired Condition of Management Area 2.8 (USDA FS 2006a).</p> <p>Sub-units of watersheds would be the 12-digit Subwatershed. The levels of hydrologic units are: 2 digit: Region 4 digit: Subregion 6 digit: Basin 8 digit: Subbasin 10 digit: Watershed 12 digit: Subwatershed</p> <p>Please see: https://pubs.usgs.gov/tm/11/a3/ and https://www.in.gov/idem/cleanwater/pages/huc/</p> <p>The project is in the 10-digit HUC (watershed) of South Fork Salt Creek.</p> <p>The four watersheds that ultimately drain into the Lake Monroe Reservoir include the South Fork Salt Creek, Middle Fork Salt Creek, North Fork Salt Creek, and Lake Monroe-Salt Creek watersheds. The proposed Houston South project occurs in the South Fork Salt Creek watershed.</p> <p>The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age.</p>

62-5	MCC/MCEC 8/26/2019	Related to the previous point, we are also curious about why no alternative locations or management approaches have been proposed for this project, especially considering the Forest Plan that defines objectives is now 13 years old. In the intervening years, we've learned much more about the threats to Lake Monroe and how those threats are expected to worsen in coming years due to climate change. As such, the agencies that manage our forests should be more attentive to how this new knowledge may impact management decisions. Alternative projects could include vegetation management activities outside of municipal surface drinking water supplies, a focus on Lake Monroe watershed health within the watershed, or activities within the watershed aimed at improving recreation opportunities but that do not present increased contamination risks.	<p>This project is consistent with and implements the Hoosier National Forest Land and Resource Management Plan (Forest Plan). The Forest Plan, through extensive public input, defined where and what kind of management activities can occur on National Forest System lands.</p> <p>Site-specific soil and water effects were analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.</p>
62-6	MCC/MCEC 8/26/2019	In closing, while we have the utmost respect for the many staff and scientists involved in the Houston South proposal, we remain very concerned that the project will have a negative impact on the Lake Monroe watershed and the lake itself. Given increased threats to the lake since the 2006 Forest Plan went into effect, we worry that any unintended negative consequences coming about because of the project will make it that much harder for our community to protect our municipal water source and one of our region's most important environmental and economic assets.	Please see response to comment 27-6 and 53-2.
63	Stacey Roesch 8/26/2019 (PR bb64)	I am opposed to any logging in the Houston South section of the Hoosier National Forest. Lake Monroe which provides water for over 100,000 residents is already impaired and logging would probably only exacerbate this.	Please see response to comment 62-5 above.
64	Friends of Lake Monroe (FOLM) 8/26/2019 (PR bb65)	The USFS claims in the draft Environmental Assessment (EA) that there are no unresolved conflicts that warrant development and analysis of additional alternatives, in spite of public requests to consider new options. The proposed action remains virtually unchanged since the initial November 2018	Please see response to comment 53-5 and 29.

		scoping letter in spite of over 500 comments; of which more than 90% expressed concerns or outright opposition from citizens, local business, environmental organizations, and local government units representing more than 10,000 people in the State of Indiana.	
64-2	FOLM 8/26/2019	<p>The Hoosier National Forest (HNF) draft environmental assessment and response to comments failed to recognize the important role that HNF plays as the largest land manager in the Lake Monroe watershed, dismissing with minimal and flawed analysis, public concerns related to the potential impact of the project on the water quality of a municipal water source. The draft EA cumulative effects analysis was incorrectly based on developing a monitoring plan in a subwatershed of Lake Monroe and did not comply with NEPA directives and public requests to identify and evaluate the potential direct, indirect, and cumulative social, economic, physical, and biological effects of the proposed action and its alternatives, particularly non-point source impacts to Lake Monroe. Citing agriculture as a significant sediment runoff problem (without evidence) does not relieve the USFS from its obligation to consider the proposed action's contribution to non-point source pollution in the currently impaired Lake Monroe watershed and the impaired South Fork Salt Creek watershed. The USFS needs to consider planned or foreseeable public and private logging, burning and herbicide applications in the LM watershed in analyzing the impact of the proposed action along with consideration of:</p> <ul style="list-style-type: none"> • Logging and oak restoration in the region; • Projected loss of current oak/hickory and maturing forest in the region; • Timber harvest and other activities in the Lake Monroe watershed by IDNR, The Nature Conservancy (TNC), TNC private landowner program and other private timber harvests; and • Development in the project area and the edge habitat created in areas developed since the studies made for the 2006 Forest Plan. 	<p>National Forest System lands make up approximately 32% of the Monroe-Salt Creek watershed and approximately 18% of the combined South Fork Salt Creek, Middle Fork Salt Creek, North Fork Salt Creek, and Lake Monroe-Salt Creek watersheds.</p> <p>The Houston South project is in the South Fork Salt Creek watershed (HUC 10), which contains four subwatersheds (HUC 12). Please see response to comment 62-4 above. Also, please refer to the map in Appendix A of this document. See also: https://www.in.gov/idem/cleanwater/pages/huc/</p> <p>“Agriculture has the potential for being the most significant source of NPS pollution in Lake Monroe's watershed” (Jones et al. 1997).</p> <p>“As we have stated previously, agriculture generates significant amounts of nonpoint source pollutants” (Jones et al. 1997).</p> <p>“The major pollutants associated with agriculture include eroded soil, nutrients (especially nitrogen and phosphorus), pesticides and other toxins, bacteria or pathogens, and salts” (Jones et al. 1997).</p> <p>The most recent USGS estimate of Agricultural use of glyphosate (USGS 2016) on agricultural lands in southern central Indiana is up to or greater than 88.06 pounds per square mile. Estimates of USFS applications for this project are much lower, EA p. 35.</p> <p>The spatial boundary used to evaluate indirect and cumulative impacts is the 10-digit hydrologic unit (HUC 10) South Fork Salt Creek watershed. This boundary</p>

		<p>To anticipate these effects, the proposed action should include a schedule of proposed logging, burning, and herbicide activities to compare to other planned or anticipated activities in the watershed.</p>	<p>permits the assessment of effects from any past, present, and reasonably foreseeable future projects that overlap in time and space with effects to soil and water from the proposed action. Cumulative effects beyond the project site watershed boundary diminish below measurable levels and cannot be meaningfully evaluated.</p> <p>Please refer to Past, Present, and Foreseeable Activities Relevant to Cumulative Effects Analysis of the Houston South Restoration Project Silviculture Report on p. 11-13.</p> <p>The IDT followed all NEPA and CEQ regulations and Forest Service policy in the analysis of this project. From scoping, the IDT determined the issues to be analyzed in depth and identified and eliminated from detailed study the issues which have been covered by prior environmental review (40 CFR 1501.7(2)(3)).</p>
64-3	FOLM 8/26/2019	<p>Unresolved conflicts identified in comments and the draft EA include:</p> <ul style="list-style-type: none"> o The draft EA relies heavily on the 13-year-old Forest Management Plan and EIS which pre-dates vital information (referred to in public comments) related to Lake Monroe water quality and climate change. o Harmful algae blooms have been the cause of recreational advisories for Lake Monroe for each year of the past nine years. The Indiana Department of Environmental Management (IDEM) lists timber harvesting among the common causes of non-point source pollution that feeds blue-green algae blooms. Unlike many watersheds, the Lake Monroe watershed is heavily forested, and nutrient loading cannot be solely attributed to agriculture. o Failures in implementing oak-hickory regeneration projects have been well documented since 2006. o Understanding of the impacts, timing, and importance of climate change has increased 	<p>Differing opinions do not indicate unresolved conflicts. Issues were analyzed in the EA. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p> <p>Please see response to comment 31 and 53.2.</p> <p>Please see response to comment 53-4.</p> <p>Please see response to comment 7, 34-3, and 34-6.</p> <p>Please see response to comment 18-5 and 29-3.</p>

		dramatically since the 2006 Forest Plan was developed and the most recent report from the International Panel on Climate Change (IPCC) states that we have 12 years to turn reverse net carbon release in the atmosphere. In this context, short-term releases cannot be mitigated by long-term benefits. Using the SERA 2011 assessment to evaluate glyphosate safety does not consider recent findings. These and many other "unresolved conflicts" must be addressed.	
64-4	FOLM 8/26/2019	<p>With no or minimal analysis or provided scientific basis, the draft EA dismisses short term impacts as insignificant, including the following:</p> <ul style="list-style-type: none"> • Loss of carbon-sequestering trees; • Release of greenhouse gas from burning; • Impact on migratory neo-tropical and ground-nesting birds; • Effects on human health and air quality from prescribed burning; • Recreational and economic impacts to horse riders, hikers and businesses resulting from trail closures, including the highly valued Knobstone Trail; • Increased soil erosion and movement from road construction; • Removal of roosts for endangered Indiana and other bats; and • Loss of vegetation and subsequent erosion and nutrient release from prescribed burning. <p>Each of these issues requires analysis and scientific support for the claims made in the draft EA.</p>	Please see response to comment 18-15, 29-3 and 29-4.
64-5	FOLM 8/26/2019	The finding of no significant impact relies heavily on successful implementation and effectiveness of best management practices (BMPs), which is not consistent with past HNF records or with the personnel resources available. The USFS did not adequately address comments requesting the level of trained personnel available for oversight and evaluation of BMPs.	<p>A finding of no significant impact has not yet been determined, that comes with the draft Decision Notice. In the draft EA, we analyzed effects relative to the Finding of No Significance Impacts (FONSI) elements.</p> <p>Please see response to comment 27-6.</p>

			<p>The Forest has two employees that perform sale administration, plus two more harvest Inspectors that have contract authority. In addition, the engineering technician has contract authority on roads. That is 5 on-the-ground personnel with contract authority, plus the Contracting Officer overseeing the contract that are monitoring ground conditions.</p>
64-6	FOLM 8/26/2019	<p>... we request that HNF eliminate logging and prescription burns from the Lake Monroe watershed and revise the purpose and need statement to consider and analyze the following alternatives:</p> <p>Alternative 1. Vegetation management in Management Area 2.8 and 3.3 outside the Lake Monroe Watershed</p> <p>This alternative would focus on actions to maintain and restore watershed health by identifying and evaluating areas of MA 2.8 and 3.3 outside of the Lake Monroe watershed where vegetation management may be used to provide a mix of age classes and forest structure.</p> <p>Alternative 2. Lake Monroe Watershed Health Protection and Enhancement</p> <p>This alternative would focus on actions to maintain and restore watershed health by protecting and enhancing the health of Lake Monroe and its tributaries. Management actions may include:</p> <ul style="list-style-type: none"> o Road decommissioning o Restoration of eroded or degraded sites on HNF land o Acquisition of additional HNF acreage in the watershed, and restoration of degraded lands that may be acquired o Collaboration with neighboring landowners (private and public) on land and water restoration projects including stream and wetland restoration projects o Collaboration with IDNR, US FWS and US COE to restore and improve aquatic habitats in the Lake and its tributaries 	<p>Forest Service NEPA regulations (36 C.F.R. 220.7 (b)(2)) state: "The Environmental Assessment (EA) shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed."</p> <p>The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age. Other areas in Management Area 2.8 are likely to be considered in the future.</p> <p>Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives.</p> <p>36 C.F.R. 220.7 (b)(2)(i)) states, "When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives."</p> <p>Differing opinions do not indicate unresolved issues. Issues were analyzed in the EA. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p> <p>Approximately 2.7 miles of road is proposed for decommissioning as part of the Proposed Action. The proposed AOPs would restore a natural flow regime that</p>

		<p>Alternative 3. HNF Forest Recreation</p> <p>This alternative would provide for recreation use in harmony with natural communities. Recognizing that Lake Monroe and the surrounding public lands (HNF, IDNR, COE) represent a major concentration of outdoor recreation lands and water, focus management actions on providing and enhancing sustainable outdoor recreation opportunities: trails, backcountry campsites, fishing and hunting access points, canoeing and kayaking access.</p> <ul style="list-style-type: none"> o Restore and improve existing recreation facilities and decommission sites or trails that cannot be adequately maintained because of poor design or location. o Ensure that recreation facilities are safe for users. o Limit vegetation management to that necessary to provide user safety and eliminate invasive species. 	<p>would promote less excessive bank erosion and help mitigate channel incision.</p> <p>Many of the other actions listed in the suggested alternatives are beyond the scope of proposed Houston South project. However, many are ongoing as part of the management of the Hoosier National Forest.</p>
64-7	FOLM 8/26/2019	<p>Numerous Responses Were Not Adequately Addressed</p> <ul style="list-style-type: none"> • HNF erroneously concludes that the project is not within a Municipal watershed (60-2.9) HNF now acknowledges that the project is in the Lake Monroe watershed (Herald Times 8-11-19) and so must adjust analysis to consider impact on Lake Monroe and the City of Bloomington Municipal water supply, including eliminating conclusions that recreational and economic impacts on Lake Monroe are outside the scope of the Project (60-2.7, 79-1.7). • Draft EA did not adequately address concerns regarding global controversy and literature cited in comments with respect to glyphosate safety. (2-5,54-1.13,54-1.14). • Draft EA did not consider new information available since the 2006 Forest Plan and EIS. <ul style="list-style-type: none"> o 13 years since the 2006 Forest Management Plan was issued and new information that is available was not used, tiering rigidly to the 2006 Forest Plan and EIS. 	<p>Please see: https://pubs.usgs.gov/tm/11/a3/</p> <p>The project is in the 10-digit HUC (watershed) of South Fork Salt Creek.</p> <p>The levels of hydrologic units are:</p> <p>2 digit: Region 4 digit: Subregion 6 digit: Basin 8 digit: Subbasin 10 digit: Watershed 12 digit: Subwatershed</p> <p>Because the project is in one of the four watersheds that ultimately drain into the Lake Monroe Reservoir (South Fork Salt Creek, Middle Fork Salt Creek, North Fork Salt Creek, and Lake Monroe-Salt Creek watersheds), we considered effects to Monroe Reservoir in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and are summarized in the EA.</p>

		<ul style="list-style-type: none"> o Harmful Algae Blooms in Lake Monroe (54-1.9). o New understanding of overall climate change impacts (54-1.26, IPCC 8-18 Report, IN Climate Change Assessment 2018), impact on forests (66-1.2, 80-1.9) and impact on algae (88-1.5). o Claims of no significant impact to municipal water supply tiered to the 2006 Forest Plan EIS which relies on BMP's to fully mitigate, did not address comments related to past history of BMP implementation. (46-1.2, 54-1.10, 54-1.11, 88-1, 80-1.5, 60-2.3). ● HNF did not alter project to address public concerns; o No evidence provided that alternate locations were seriously considered by HNF, despite many requests to do so (14.22, 60-2.9 and EA p8). o Claims of no "unresolved conflicts" are incorrect (54-1.31). o No additional alternative offered to address concerns of citizens, local government and environmental organizations. The Project has remained essentially unchanged since November 2018 in spite of over 500 comments with over 90% expressing concerns and outright opposition, including organizations representing over 10,000 people. o Under Council of Environmental Quality guidelines, when there are unresolved conflicts as demonstrated throughout, a FONSI cannot be issued and alternatives must be explored. 	<p>Regarding glyphosate safety, see response to comment 18-5 and 29-3.</p> <p>We tiered to the 2006 Forest Plan FEIS when appropriate, but also used the most current scientific data available to analyze the issues in the specialists reports and biological evaluations and summarized in the EA.</p> <p>Climate change was analyzed under Issue 11 in the draft and final EA.</p> <p>Regarding alternatives and unresolved conflict, see response to comment 53-5.</p>
64-8	FOLM 8/26/2019	<p>The Draft EA Analysis is Insufficient or Incomplete</p> <ul style="list-style-type: none"> ● No data to support the conclusion that the Project will not have significant impact on Lake Monroe water quality. (60-2.5). o Insufficient description of project location with respect to steep slopes and bottomlands. We have heard from Forest Supervisor Michael Chaveas that the project will change once it is approved. The project needs to be fully understood and mapped in advance of approval, with specified conditions for areas that would not be treated and areas that would be treated. o Reliance on a paired watershed study with agricultural effects on control (Moss 1995). 	<p>The impact on soil and water was analyzed in the Report for the <i>Houston South Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>Implementation would occur within the areas analyzed. What the Forest Supervisor stated was that not all the area within the individual stands would be harvested. However, all the area within the stand was analyzed.</p> <p>The analysis did not rely on the Pate Hollow study, it was used as one of many references.</p>

	<p>Because the control site for this study was downgradient of an agricultural area, the results of this study are not a reliable indicator of BMPs. Moreover, in a study like this, the BMP implementation is expected to be at its highest achievable level, a condition that is not expected in HNF, given past records of BMP implementation and evaluation.</p> <ul style="list-style-type: none"> ○ Misinterpretation of literature related to agricultural impacts (54-1.9, SPARROW). We have attached a map of the Midwest sites included in the SPARROW model (Figure 1). As you can see, all of the sites, except controls, are in agricultural settings. The author's conclusion that agriculture contributes to nutrient loading in the Midwest is indisputable, however HNF's interpretation that agriculture is responsible for most sediment and nutrient loading in the South Fork of Salt Creek is not supported by this research. Jones et al (1997) modeled Phosphorus loading in the Lake Monroe watershed based on land use and estimated 47.2% of P loading came from forested land while 48.5% came from agricultural land. While the P loading rate from agriculture is generally higher than forested land, agriculture comprises only 7.7% of the watershed and the steep slopes and highly erodible soils present in the forested areas of the watershed contribute a significant amount of Phosphorus to Lake Monroe. <p>Heavy reliance on outdated Hoosier National Forest revised Land and Resource Management Plan (2006 Forest Plan).</p> <ul style="list-style-type: none"> ○ Climate change assessments worsening, no negative short-term impact is acceptable. (66-1.2). ○ Does not consider net carbon release data on the need to maintain mature forests. (66-1). <p>Does not address cumulative effects for other activities in the Lake Monroe watershed, as required under NEPA (54-1.4, EA-32, 60-2.9).</p>	<p>The ID Team did not rely on the SPARROW model to analyze the South Fork of Salt Creek, we used Bunch (2016) to state the contributors to eutrophication and that overload of nutrients are a common problem and are usually caused from agricultural practices.</p> <p>The ID Team did rely on Jones et al. (1997) to conclude that adequate BMPs can keep excessive soil erosion from being detrimental to water quality.</p> <p>Please see response to comment 64-2.</p> <p>We tiered to the 2006 Forest Plan FEIS when appropriate, but also used the most current scientific data available to analyze the issues in the specialists reports and biological evaluations and summarized in the EA.</p> <p>Climate change was analyzed under Issue 11 in the draft and final EA.</p> <p>Regarding cumulative effects and the boundary selected, please see response to comment 64-2.</p>
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	<ul style="list-style-type: none"> o Spatial boundary for cumulative effects chosen for future monitoring does not reflect the well-established importance of non-point source pollution in the Lake Monroe watershed (EA-64). Lake Monroe is listed as impaired by the EPA. Citing agriculture as the major sediment runoff problem does not relieve the USFS from its obligations to consider other activities in the Lake Monroe watershed (88-1.2). The cumulative effects analysis should consider public and private harvest, burning and herbicide applications in the Lake Monroe watershed whether or not they are controlled by HNF. o Consider logging and oak restoration, loss of current oak/hickory, loss of maturing forest and other activities in the Lake Monroe watershed by IDNR, The Nature Conservancy (TNC), TNC private landowner program and other private timber harvests. o Consider effects of development in the project area and the creation of edge habitat in developed areas. o Need schedule of project proposed logging, burning and herbicide activities to compare to other planned or anticipated activities in the watershed EA, p.19). o Impact on Non-Native Invasive Plant Species (NNIPS) by private landowners (EA, p.19). o Sustained prescribed burning impact on air quality (EA, p.16) and carbon emissions (EA, p.20). <p>Dismissing numerous short-term impacts as Not Significant.</p> <ul style="list-style-type: none"> o Impact on migratory neo-tropical and ground nesting birds (80-1.15 & 1.16) o Human health and air quality from prescribed burning (EA, p.16,17) o Horse riders and economic impact and hikers including the Knobstone Trail (60-2.6, 61-1, EA p26) o Road construction on soil erosion and movement (EA, p.20) o Removal of roosts for the Endangered Indiana and other bats (80-1.1). Loss of vegetation and subsequent erosion and nutrient release from prescribed burning. 	<p>The draft EA did not dismiss short-term impacts. Site-specific effects were analyzed in the specialist reports and BE's and effects disclosed in the draft EA.</p> <p>Regarding migratory neo-tropical and ground nesting birds, see response to comment 18-15 and 29-4.</p>
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		<p>Herbicide Use Defers to Dated Evaluations (SERA 2011).</p> <ul style="list-style-type: none"> ○ Does not consider recent data on glyphosate impact on non-targets like bees, amphibians and micro biota (54-1.12,1.13,1.14,1.15). ○ Does not address sediment bound glyphosate fate in the creek and Lake bottoms (https://doi.org/10.3389/fenvs.2019.00022). ○ Does not consider recent court decisions and testimony related to human health concerns about glyphosate (21-1.3). ○ Has provided no quantitative analysis of herbicide movement or fate (21-1.2). ○ Does not address the unintended consequences and risk associated with future discoveries regarding pesticide safety and environmental impact, including the effects on Lake Monroe's water quality and water treatment costs that City of Bloomington would need to cover for the utility that provides drinking water to 120,000 people. <p>Draft EA does not consider public concerns and controversy related to purpose and need.</p> <ul style="list-style-type: none"> ○ Controversy regarding natural history of Oak/hickory in project area (70-1.8). ○ Draws conclusions from national scale theoretical fire models which conflict with local fire scar evidence (Guyette et al, 2009, 2012). ○ The national model of fire intervals mapped by Guyette and used by HNF fire specialists to determine a fire interval was displayed at the HNF open house on August 2019. This model uses three variables (temperature, pressure and partial pressure of oxygen) to model fire frequency. According to the author, "(the) Model's primary purpose is related to understanding the physical chemistry related to climate and fire." The author acknowledges 	<p>Regarding glyphosate, see response to comment 18-5 and 29-3.</p> <p>The Houston South project is consistent with and implements the Forest Plan in which the purpose and need was developed.</p> <p>Fire history has already been determined in the Forest Plan EIS (USDA FS 2006b). The EIS discusses the historical context of the southern Indiana landscape (3-74 to 3-77).</p>
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		<p>that other important factors that determine fire frequency were not considered in the model. There is no evidence in the project area that historical fire was frequent or widespread.</p> <ul style="list-style-type: none"> o We consider the responses to comments (66-1.2 & 80-1.9, 54-1.26) to be incomplete and unscientific. o Further inquiries to HNF reveal the reason that there are no trees in the 0-9 age class is that all of the trees in that age group are growing under taller trees, and a "stand" is defined by the tallest trees in an area. So that listing is not telling us that there are no trees in that age group growing in the forest, but that there haven't been any clearcuts in the last several years to make that age group into a stand. So, while there may be young oaks in the 0-9 age class, they have been excluded by the methodology chosen for the analysis and consequently have biased results and interpretations drawn from them. o Spread of Non-native invasive species will damage the health of the forest. Forest Service confirms that this project will increase the spread of non-native invasive species and will require additional use of herbicides to mitigate (EA, p.17-18). 	<p>Comment noted.</p> <p>This project is consistent with and implements Forest Plan direction to maintain 4 to 12 percent of the area in young forest habitat.</p> <p>Design measures, such as requiring equipment to be cleaned and inspected before entering the project area, were developed to decrease NNIS introduction and spread. Appendix A of the EA contains the list of project design measures.</p>
64-9	FOLM 8/26/2019	<p>History of Best Management Practices (BMP) Shows Inadequate Performance (HNF Biennial Monitoring and Evaluation Forest Report for FY 2016 and 2017, HNF Monitoring and Evaluation FY 2011-2014, HNF Monitoring Postponement Dec 6, 2017).</p> <p>While we agree that employees of the Hoosier National Forest are professionals and are dedicated to the conservation of our natural resources, this response does not adequately address our concern about the level of staffing needed to enforce BMPs. We ask again that HNF evaluate the availability of professional foresters and scientists on the HNF staff to properly oversee implementation and include in their analysis site maps with detailed locations of roads and skid trails that are in accordance with State of Indiana BMPs and HNF standards and guidelines (54-1.11).</p>	<p>Please see response to comment 27-6 and 53-2.</p> <p>Please see response to comment 29-5.</p> <p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>Visitor use statistics can be found at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd658366.pdf</p>

		<p>Did not address commenter supplied IDNR reports citing local problems with BMP reliance (60-2.5),</p> <ul style="list-style-type: none"> • Did not address effects from predicted increases in rainfall events (88-1.5, IN Climate Change Assessment 2018). • USFS Did not address requests for protecting trails for recreational uses (60-2.6 & 61-1). • USFS did not provide recreational user survey (60-2.6). 	
65	David H Seastrom 8/26/2019 (PR bb66)	<p>I am deeply concerned that the Forest Service incorrectly claims in the Draft Environmental Assessment (EA) there are no unresolved conflicts that deserve further analysis. It's clear that the proposed action is largely unchanged even after 500 + comments from environmental organizations, citizens, and local business interests. During the comment period many important concerns were carefully stated and seemingly ignored.</p>	<p>The Hoosier received comments from 90 individuals or groups. Most comments during the scoping period were either questions regarding the proposal or requests to extend the scoping period. There were many concerns and opposition, but there were many supportive comments as well. Every comment was considered, and a response was given.</p> <p>Differing opinions do not indicate unresolved issues. Issues were analyzed in the EA. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
65-2	David H Seastrom 8/26/2019	<p>Judging from the official response, the Forest Service is not recognizing the responsibility it has to the people who depend entirely on Lake Monroe for their water supply. The Forest Service is the largest property manager in the Lake Monroe water shed. The proposed logging project which may include clear-cutting, and other forms of logging on thousands of acres of steep slopes draining into the South Fork of Salt Creek, will undoubtedly cause sediment runoff into Lake Monroe. The erroneous citation of other sources of significant sediment runoff from agriculture does not absolve the Forest Service from its obligation to act in the best interest of the public, and protect this water source from additional pollution.</p>	<p>Please see response to comment 64-2 and 64-7.</p>
65-3	David H Seastrom	<p>The 13-year-old Forest Management Plan does not include current vital information about the harmful</p>	<p>The draft EA tiered to the 2006 Forest Plan FEIS when appropriate, but also used the most current scientific</p>

	8/26/2019	blue-green algae blooms and their impact on recreation in Lake Monroe. Advisories have taken place each year for the last nine years. Attributing this occurrence solely to agriculture pollution ignores the fact that the Lake Monroe watershed is heavily forested. Logging activity from the IDNR, private property, and the Nature Conservancy have more impact than agriculture.	data available to analyze the issues in the specialists reports and biological evaluations and summarized in the EA.
65-4	David H Seastrom 8/26/2019	I'm also concerned that this plan does not properly address climate change. No amount of remediation will prevent carbon from being released into the atmosphere from logging and burning, both of which are in the FS proposal. The Forest Service has not evaluated the risk of major soil erosion caused by the increasing frequency of extreme rainfall events. The proposed use of glyphosate to control invasive plant species does not take into consideration current findings about possible safety and environmental concerns. I see these and many other issues as "unresolved conflicts" that must be addressed.	Climate change was analyzed under Issue 11 in the draft and final EA. Regarding increasing frequency of extreme rainfall events, see response to comment 29.5. Regarding glyphosate, see response to comment 18-5 and 29-3.
65-5	David H Seastrom 8/26/2019	The Environmental Assessment dismisses several short-term impacts as insignificant. These include: the loss of carbon-sequestering trees; the impact on wildlife by removing roosts for the the endangered Indiana and other bats, and the loss of habitat for migratory and ground nesting birds. The impact on the local economy from the disruption to horse riders, hikers, and primitive campers resulting from the years of trail closures, especially the highly valued Knobstone Trail. The impact from increased soil erosion caused by road construction and logging. The impact on human health, the release of greenhouse gasses, the loss of vegetation, and the increased erosion and nutrient release as a result of prescribed burning.	Site-specific effects were analyzed in the specialist reports and BE's and effects disclosed in the draft EA. Regarding migratory neo-tropical and ground nesting birds, see response to comment 18-15 and 29-4.
65-6	David H Seastrom 8/26/2019	The assessment that there is no significant impact is predicated on successful implementation and effectiveness of best management practices. Past HNF records indicate that under the best circumstances these practices fall short of the mark,	Please see response to comment 27-6 and 53-2.

		and even if they were followed to the letter, there isn't enough personnel resources to do the job properly.	
66	Jeff Marks 8/26/2019 (PR bb67)	As a horse rider, I am concerned that the US Forestry Service has not proven that the activity proposed that riding of horses in the forest will be no more hazardous than it currently is after the proposed activities are complete. Erosion and other effects on the air and water supplies may present dangers that have as yet not been ruled out. Closing the trails for extended periods of time will affect both the riding public and any private or public facilities that support this activity in the forest. Please prove that this activity will have no impact on these recreational activities.	<p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>The impact on soil and water was analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>The impact on air quality was analyzed in the <i>Houston South Environmental Assessment - Effects to Air Quality and Fuels</i> and summarized in the EA.</p>
67	David Simcox 8/26/2019 (PR bb68)	<p>...there is a concern that EA was conducted under the assumption that the Project is not in the Lake Monroe watershed and bounded only by the Houston South sub-watershed. At a recent public forum, the Forest Service (FS) now acknowledges that the Project is in the Lake Monroe watershed.</p> <p>The EA text mentions Lake Monroe only three times. It appears as though FS leadership did not appreciate the important role that Hoosier National Forest (HNF) plays in the Lake Monroe watershed. The document and commentary are not responsive to public concerns over the potential impact this Project could have on the water quality of this reservoir which services one of the largest populations in Indiana who depend upon surface supplied drinking water.</p>	Please see response to comment 64-7.
67-2	David Simcox 8/26/2019	The draft EA cumulative effects analysis was incorrectly based on developing a monitoring plan in a sub-watershed of Lake Monroe and did not comply with NEPA directives and public requests to identify and evaluate the potential direct, indirect, and cumulative social, economic, physical, and biological effects of the proposed action and its alternatives, particularly non-point source impacts to Lake Monroe. Citing agriculture as a significant sediment runoff	Please see response to comment 64-2.

		problem (without evidence) does not relieve the FS from its obligation to consider the proposed action's contribution to non-point source pollution in the currently impaired Lake Monroe watershed and the impaired South Fork Salt Creek watershed.	
67-3	David Simcox 8/26/2019	<p>The description on page 8 of the EA of how a decision was reached to select the Houston South area for the management action out of approximately 88,000 acres of General Classification 2.8 forest leaves open to skepticism the impartiality of the process. Were comparable stand assessments also conducted in other northern 2.8 areas as noted for the Project area,? If so, where?</p> <p>In that same section of the EA no mention is made of the Project being in the Lake Monroe watershed. How could an assessment be properly conducted with one of the key a prior assumptions being incorrect – that of not being in the Lake Monroe watershed?</p> <p>I respectfully request that you release to the public all your analysis and reports on how the decision to select the Houston South area from the vast available HNF area was determined. Without such disclosure, we can only assume a lack of rigor in your analysis when it involved including the impact on a watershed supplying surface drinking water to 120,000+ residents.</p>	<p>This project is consistent with and implements the Hoosier National Forest Land and Resource Management Plan (Forest Plan). The Forest Plan, through extensive public input, defined where and what kind of management activities can occur on National Forest System lands. The proposed project is in Management Area 2.8 as described in the Forest Plan.</p> <p>Please see response to comment 64-7.</p> <p>The project website contains much information regarding the project, including Specialist Reports, Biological Evaluations, Forest Carbon Assessment, etc. Material referenced in the draft EA that are not on the website are in the project record and is available upon request.</p>
67-4	David Simcox 8/26/2019	The EA relies heavily on the 13-year-old Hoosier National Forest revised Land and Resource Management Plan (Forest Plan) and accompanying Environmental Impact Statement (EIS) which pre-dates vital information related to Lake Monroe water quality and climate change. Examples are: A) Harmful algae blooms have been the cause of recreational advisories for Lake Monroe for each year for the past nine years. The Indiana Department of Management (IDEM) lists timber harvesting among the common causes of non-point source pollution that feed blue-green algae	<p>A) Site-specific soil and water effects were analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>B) Please see response to comment 53-4.</p> <p>C) Please see response to comment 34-3, and 34-6.</p> <p>D) Please see response to comment 18-5 and 29-3</p>

		<p>blooms. Unlike many watersheds, the Lake Monroe watershed is heavily forested, and nutrient loading cannot be solely attributed to agriculture. B) Failures in implementing oak-hickory regeneration projects have been well documented since 2006 (2). C) Significant changes in climate assessments have occurred, see No 6 below and D) Using the SERA 2011 assessment to evaluate glyphosate safety does not consider recent findings, see No 7 below.</p>	
67-5	<p>David Simcox 8/26/2019</p>	<p>The finding of no significant impact relies heavily on successful implementation and effectiveness of best management practices (BMPs), which is not consistent with past HNF reported performance or with the personnel resources available for the Project (as noted in the detail section below). The FS did not satisfy comments looking for increased trained personnel available for oversight and evaluation of BMPs.</p> <p>Extreme rainfall events are projected to increase from an already accelerated pace in the last three decades, see the 2018 Indiana Climate Change Impacts Assessment (3). These extreme events will put even greater pressure on achieving near perfect performance by implementing BMP's to prevent intense erosion events. The FS is not starting from a good position to address this challenge. By not addressing the rainfall issue and not proposing staffing increases leaves open another serious unresolved conflict.</p> <p>The FS Response did not address questions raised by the IDNR report on BMP's that note the risks associated with relying upon BMP's (4). Statistics show performance is never perfect thus never a safeguard to prevent sedimentation. Combine that with more extreme rainfall events and the FS cannot conclude that sedimentation will be prevented. Ongoing monitoring plans provides no safeguard in these extreme events.</p>	<p>Please see response to comment 27-6, 29-5, and 53-2.</p>

		<p>The USDA categorizes soils with severe or very severe risk of erosion from logging. See the Detailed Reference Section for those soil types. The EA makes no distinction as to exclusions based upon soil type. Activities with risk of causing erosion in the Project area including, but not limited to, logging, mechanized travel, water dispersion outflows, prescribed burns, and crop release should not occur on the fragile soil types noted by the USDA.</p>	
67-6	<p>David Simcox 8/26/2019</p>	<p>Understanding of the impacts, timing, and importance of climate change has increased dramatically since the 2006 Forest Plan was developed and the most recent report from the International Panel on Climate Change states that we have 12 years to mitigate carbon release in the atmosphere. In this context as incorrectly argued in the EA, mitigation by long-term gains cannot be a consideration. In fact, so much carbon is lost from the deadwood and forest floor litter that a new forest requires about 15 years of growth to contain as much carbon as the site contained immediately following the harvest and removal of mature trees.</p> <p>In spite logging proponent's efforts to argue otherwise, it is clear that timber removal reduces carbon assimilation in the long term. From Harmon "Simulations of carbon storage suggest that conversion of old-growth forests to young fast-growing forests will not decrease atmospheric carbon dioxide [CO2] in general, as has been suggested recently. During simulated timber harvest, on-site carbon storage is reduced considerably and does not approach old-growth storage capacity for at least 200 years. Even when sequestration of carbon in wooden buildings is included in the models, timber harvest results in a net flux of CO2 to the atmosphere."</p>	<p>Please see response to comment 34-2, 34-3, and 34-6.</p>
67-7	<p>David Simcox 8/26/2019</p>	<p>Likewise Depro says in 2008 (8) "Our analysis found that a "no timber harvest" scenario eliminating harvests on public lands would result in an annual increase of 17–29 million metric tonnes of carbon</p>	<p>The referenced study is a nationwide study. We have a model for both the Hoosier and the Houston South project in our analysis.</p>

		<p>(MMTC) per year between 2010 and 2050—as much as a 43% increase over current sequestration levels on public timberlands and would offset up to 1.5% of total U.S. GHG emissions. In contrast, moving to a more intense harvesting policy similar to that which prevailed in the 1980s may result in annual carbon losses of 27–35 MMTC per year between 2010 and 2050. These losses would represent a significant decline (50–80%) in anticipated carbon sequestration associated with the existing timber harvest”</p> <p>Prescribed burning over a 10 year period would only exacerbate the impact on carbon releases. Again claims in the EA that these are only short-term effects does not take in consideration recent climate change assessments that warn against such actions.</p> <p>If everyone used the FS logic in the EA that individual contributions to greenhouse gas emissions are too small to worry about, then it would be impossible to address this crisis.</p>	<p>Please see response to comment 34-2, 34-3, and 34-6.</p>
67-8	<p>David Simcox 8/26/2019</p>	<p>In the last decade glyphosate use has grown exponentially and the product has also received widespread attention due to concerns over human safety and impact on non-target organisms. The reliance on a 2011 SERA assessment is as outdated as is the EIS in 2006. The FS received numerous questions and concerns about applying herbicides, especially glyphosate, in this watershed. Stating there will be no impact is not a satisfactory response.</p> <p>The EA did not include a review of a recent study demonstrating the impact on bees by glyphosate inhibiting gut micro flora. Glyphosate blocks an enzyme in amino acid biosynthesis that is present in most microbes and therefore glyphosate is an antibiotic. This study was done with technical grade glyphosate. Explanations citing surfactant effects are not valid here. See Motta.</p>	<p>Regarding glyphosate safety, please see response to comment 18-5 and 29-3.</p> <p>We believe you are referring to the publication by Erick V.S. Motta et al., in PNAS, October 9, 2018: “Glyphosate perturbs the gut microbiota of honey bees”. Motta et al. used a previous study by Lucila T. Herbert, et al., 2014 in The Journal of Experimental Biology: “Effects of field-realistic doses of glyphosate on honeybee appetitive behavior” to determine the amount of glyphosate that was fed to the bees in Motta’s study. Herbert, et al.’s level of glyphosate was based on reasonable rates that bees experience in agricultural settings where herbicide is broadcast over a field. The process used by Herbert et al. was based on the amount of glyphosate bees experienced when foraging on flowers that were broadcast sprayed with glyphosate or the amount of drift found in natural environments next to the sprayed field crops. First, the USFS would not be broadcasting</p>

		<p>The EA also did not refer to a recent study on glyphosate impact on amphibians. See Relyea.</p> <p>The environmental fate of glyphosate in aquatic environments is complex. We know it binds to soil particles, but it also can be released by the presence of metal cations as complexes as noted by Borggard. We also know that glyphosate residues can be found in water where it was previously bound to particles present in sediment. It is irrelevant what the source of particle bound glyphosate was, only that it can be released into aquatic environments. Thus understanding the fate of soil particles from erosion is paramount. The FS has not conducted any modeling of soil movement or herbicide contamination in the watershed.</p> <p>Referring to an EPA label while ignoring recent science is not prudent. There is a major controversy about the human health impact of glyphosate. Why, when knowing all this, would this product be used so widely in a watershed serving 120,000+ people?</p> <p>The FS needs to consider the unintended consequences of using glyphosate as articulated by Rushton et al in 2016. This well researched article provides numerous references for examination. In fact, less is known about the other two herbicide products listed in the EA. As with the glyphosate argument above, why is the FS recommending to take these risks?</p>	<p>glyphosate, but rather doing targeted treatments on tree stumps and trunks, where there would be little to no drift occurring. Secondly, the USFS would not be applying glyphosate to flowers that bees would be foraging on, the glyphosate would be applied to tree stumps and trunks. So, with the USFS use of glyphosate not impacting foraging sources (flowers), it is not likely to have the same impacts on bees that are discussed in Motta, et al. publication.</p> <p>We assume you are referencing the March 2012 article by Rick A. Relyea in Ecological Applications: “New effects of Roundup on amphibians: Predators reduce herbicide mortality; herbicides induce antipredator morphology”. The research looked at three levels of Glyphosate MAX on 3 species of tadpoles in the presence or absence of 2 predatory species. The research showed mortality of tadpoles at the highest level of herbicide, and then interactive results on development morphology and herbicide mortality dependent on if predators were present. We are aware that non-aquatic approved glyphosate can be toxic and detrimental to amphibians and fish, thus we follow all restrictions on herbicide labels. The EA contains additional Design Measures (Appendix A) which includes: “Apply only formulations approved for aquatic use in or next to surface waters. Minimize the use of triclopyr (ester formulation) or surfactants used with glyphosate (terrestrial version) within ephemeral, intermittent or perennial stream corridors, or within 100 feet of lakes, ponds or wetlands.” Since the herbicides are being selectively applied to trunks and stumps of trees (not foliar applications) the chance of overspray is low, and the potential for glyphosate entering waters with tadpoles while possible, is highly unlikely and thus impacts to amphibians would be negligible.</p> <p>We assume you are referencing the “Fate of glyphosate in soil and the possibility of leaching to ground and surface waters: a review” by O.K. Borggaard and A. L.</p>
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			reach soils and further reduced the potential for herbicides to reach streams and other surface waters (dissolved or suspended by soil) to a minimal level. See also Response #69-3
67-9	David Simcox 8/26/2019	<p>With no or minimal analysis or scientific basis, the EA dismisses short term impacts as insignificant, including the following:</p> <ul style="list-style-type: none"> ○ Loss of carbon-sequestering trees; ○ Recreational and economic impacts to horse riders, hikers and businesses resulting from trail closures, including the highly valued Knobstone Trail; ○ Increased soil erosion and movement from road construction; ○ Prescribed Burning: impact on migratory neo-tropical and ground nesting birds, removal of roosts for the Endangered Indiana and other bats, loss of vegetation and subsequent erosion and nutrient release and Human health and air quality. 	Please see response to comment 29-4.
67-10	David Simcox 8/26/2019	<p>The incorrect identification of the watershed then leads the FS to reach even further by saying it does not consider the cumulative effects on the Lake Monroe watershed since they (sic) not traceable to the Project.</p> <p>There is extensive logging and oak restoration work occurring in the region. The need to conduct oak/ hickory restoration in the northern section of HNF must be considered in the larger context of what is needed. For example to be included: timber harvest and other activities in the Lake Monroe watershed by IDNR, The Nature Conservancy (TNC), TNC private landowner program and other private timber harvests.</p> <p>The EA does not consider the considerable development in the project area and watershed and how much does that contribute to creation of edge habitat.</p>	<p>Please see response to comment 64-2.</p> <p>Design measures, such as requiring equipment to be cleaned and inspected before entering the project area, were developed to decrease NNIS introduction and spread. Appendix A of the EA contains the list of project design measures.</p>

		As noted in the EA, Indiana faces severe problems with the spread non-native invasive plant species (NNIPS). It is well known that land disturbances such as logging, road building or creating clearings contribute to this spread. It is also acknowledged that this Project, even with all the precautions that could be taken, will still contribute to the spread of NNIPS.	
67-11	David Simcox 8/26/2019	<p>In several instances references were made to studies or models that did not reflect the claims made in the article.</p> <p>The Guyette study does not support the conclusion that burning by Native American's was widespread. In fact Native Americans used the highlands as those of the Project area as camps while hunting or in migration. Villages that would necessitate clearing for agriculture were found in the low-lying river valleys, not in the highland subject area. Claims that widespread burning in pre-settlement times favored oak/hickory forests in this region are not well founded.</p> <p>The SPARROW model focused on heavy agricultural mid-western areas. To claim that agriculture was the primary reason for nutrient derived eutrophication is not surprising since the study included limited forested areas.</p>	<p>The use of fire and the clearing of land by Native Americans and European settlement has already been determined in the Forest Plan EIS (USDA FS 2006b). The EIS discusses the historical context of the southern Indiana landscape (3-74 to 3-77).</p> <p>Regarding the SPARROW model, see response to comment 64-8.</p>
67-12	David Simcox 8/26/2019	<p>The Forest Service (FS) claims in the EA that there are no unresolved conflicts that warrant development and analysis of additional alternatives, in spite of public requests to consider new options. The proposed action remains virtually unchanged since the initial November 2018 scoping letter in spite of over 500 comments >90% of which were concerns and outright opposition from citizens, local business and environmental organizations representing more than 10,000 people in the State of Indiana.</p> <p>As a result under Council of Environmental Quality guidelines, when there are unresolved conflicts as</p>	Please see response to comment 29.

		demonstrated here and throughout, a FONSI cannot be issued and alternatives must be explored.	
67-13	David Simcox 8/26/2019	<p>The Forest Plan has a more expansive and inclusive view of what HNF should be for the citizens of Indiana. Many of the goals stated in the Forest Plan and descriptions of the HNF were not included in the EA. Alternatives should be sought that provides a better balance and representation of the Forest Plan, as such:</p> <p>a) Lake Monroe Watershed Health Protection and Enhancement This alternative would focus on actions to protect and enhance the health of Lake Monroe and its tributaries. Management actions may include:</p> <ul style="list-style-type: none"> ○ Road decommissioning, restoration of eroded or degraded sites on HNF land ○ Acquisition of additional HNF acreage in the watershed and restoration of degraded lands that may be acquired. ○ Collaboration with neighboring landowners (private and public) on land and water restoration projects including stream and wetland restoration projects ○ Collaboration with IDNR, US FWS and US COE to restore and improve aquatic habitats in Lake Monroe and its tributaries <p>b) HNF Forest Recreation Alternative</p> <ul style="list-style-type: none"> ○ This option recognizes that Lake Monroe and the surrounding public lands (HNF, [DNR, COE) represent a major concentration of outdoor recreation lands and water, focus management actions on providing and enhancing sustainable outdoor recreation opportunities: trails, backcountry campsites, horseback riding, fishing and hunting access points, canoeing and kayaking access. ○ Efforts would be made to restore and improve existing recreation facilities and decommission 	Please see response to comment 53-5.

		<p>sites or trails that caruot (sic) be adequately maintained because of poor design or location.</p> <ul style="list-style-type: none"> ○ They would ensure that recreation facilities are safe for users. ○ Limit vegetation management to that necessary to provide user safety and eliminate invasive species. <p>c) Vegetation Management in Other 2.8 and 3.3 Areas</p> <ul style="list-style-type: none"> ○ Seek vegetation management in Management Area 2.8 and 3.3 excluding any watershed area including Lake Monroe that provides surface water to a municipal drinking water supply. ○ Identify and evaluate other areas of MA2.8 and 3.3 where vegetation management may be used to provide a mix of age classes and forest structure. <p>d) Acquire New Lands for Oak/Hickory Restoration</p> <ul style="list-style-type: none"> ○ HNF would acquire new lands to pursue and evaluate approaches to oak-hickory forest restoration in the northern end of the HNF. ○ These could be classified as Management Area 8.3 -- Experimental Forests -- for the research and study of forest ecosystems. 	
68	<p>Randall Pflueger KHTA 8/26/2019 (PR bb69)</p>	<p>Buffer regions preserve the hiking experience: KHTA asks that consideration be given to providing buffer areas, effectively a corridor, around these trails. In this way, for the duration of the Project and beyond, the character of the KT is preserved to provide a safe, national-caliber hiking experience for those traveling the Knobstone Extension in the Hoosier National Forest.</p> <p>In the case of Comment 1, that buffer regions (or corridors) preserve the hiking experience, it would be disingenuous to suggest that the aesthetic experience sought by the preponderance of forest visitors is characteristic of managed space such as can be obtained in local (town, city, or county) parks. The</p>	<p>Effects to recreation and visuals were analyzed in the EA, Issue 7: Concern that proposed harvest treatments and prescribed fire treatments could degrade the visual quality along trail corridors.</p>

		<p>word "forest" is not readily, or usually, associated with the managed portions of these assets such as parking lots and rest areas. As an advocate for hikers, and for the KT, the KHTA considers this request – for an unmanaged corridor surrounding the KT in the HNF – to be unresolved by any of USFS-HNF responses 76-1, 76-1.2, or 76-1.3. The absence of resolution is expected to have serious impact on experience of the public hiking the KT in the HNF – a near-term impact associated with the Houston South project, and longer term impact from a combined failure to institutionalize a protective buffer and the prospect of future management interventions along the KT.</p>	
68-2	<p>Randall Pflueger 8/26/2019</p>	<p>"Buffer areas help with collaboration and trail adoption: In addition to ensuring the KT hiking experience is not diminished, the KHTA also suggests that collaboration with other HNF user groups, for the purpose of improving and maintaining HNF trails, will be aided by having buffer regions isolating the KT from activities related to the Project."</p> <p>The principal KHTA objection to proceeding with the Project without a trail corridor was overlooked and left unaddressed by the USFS reviewer. The absence of a corridor which isolates the trail from "the Project" makes recruitment and retention of volunteers more difficult than otherwise. Alternatively, establishing an unmanaged corridor for the KT makes recruitment and retention of volunteers much easier, both for the aesthetic value to the hiking public and protection of the trail as a long-term accomplishment of the corps of volunteer.</p> <p>The corps of trained volunteers having a firm commitment to forest service is an essential component to assuring trail sustainability. From [7], p.12, "Development of any additional DNR-managed sections of the Knobstone Trail will require either a firm commitment from volunteers to maintain them or additional DNR staff. The department simply does not</p>	<p>Effects to recreation and visuals were analyzed in the EA, Issue 7: Concern that proposed harvest treatments and prescribed fire treatments could degrade the visual quality along trail corridors.</p>

		<p>have the human resources to adequately maintain the Knobstone Trail beyond the existing 58-mile section. In fact, additional assistance on the existing trail is needed in order for the Streams and Trails South Field Crew to work on constructing or improving trail in the Knobstone North segment.”</p> <p>Sustainability of trails, USFS policy bearing on forest management to achieve sustainable trails, and the administrative tools and processes presently at the disposal of the Forest Supervisor for achieving sustainability, are discussed throughout</p>	
68-3	Randall Pflueger 8/26/2019	<p>The success of the KT as Indiana’s contribution to the national trail system depends on developing and sustaining the perception with the hiking public of the KT as a safe, permanent, high-quality, national-class hiking venue. Central to this perception are route selection, trail design and construction, and sustaining a robust capacity for maintenance.</p> <p>A principal challenge (and source of risk, if left unattended) to the KT is developing a robust volunteer corps capable of supporting sustainable, and sustained, maintenance of the completed trail. The increasing necessity of leveraging scarce resources by recruiting, training, and sustaining volunteers is widely recognized by forest professionals and volunteer groups, with guidance for such efforts available from both state and federal agencies.</p>	On page 29 of the EA, Figure 9 shows the condition of Hickory Ridge Trail #11 in May of 2019. Trail #11, along with many other segments of the Knobstone Trail in the project area, are in riparian areas or poor locations and are not sustainable. Trail reroutes, not maintenance, are needed, which could occur under the Proposed Action.
68-4	Randall Pflueger 8/26/2019	Review of analysis and policy related to leveraging volunteers for trail construction and maintenance on USFS administered land indicates – beginning with the National Forest Management Act of 1976 and culminating with the National Forest System Trails Stewardship Act (2015-2016) and the National Strategy for a Sustainable Trail System (2016) – an unbroken forty-three year evolution away from managing primarily to ensure the maximum capacity for sustainable harvest (MCSH) to managing for MCSH and Sustainable Trail Systems (STS) (or, more	See response to comment 68-3 above.

		<p>generally, for total system sustainability (TSS)). Similarly, an exemplary articulation of DNR policy on this subject, contained in the Knobstone Trail Draft Extension Plan (Draft Plan) of 1996[7], provides extensive guidance on the necessity for, and the structure of, a Volunteer Oversight Group (VOG) to sustainably maintain trails – in particular to sustainably maintain the expanded Knobstone Trail. The Draft Plan is unequivocal and unambiguous in taking account of volunteer support for the Knobstone Trail as it is extended to its natural limits within Indiana 13, as is federal forest trails policy.</p> <p>Guidance on the necessity of transactional alignment, and on policies and processes for achieving it via coherent, mutually acceptable constraints on the options of agencies and volunteers, is less readily apparent. This lack of visibility is pointed to by Fennell in the 2013 GAO critique, through the observation that "...while the agencies goal in the Forest Service Manual is to use volunteers, the agency has not established collaboration with and management of volunteers who help maintain trails as clear expectations for trails staff responsible for working with volunteers, and training in this area is limited. Some agency officials and stakeholders stated that training on how to collaborate with and manage volunteers would enhance the agency's ability to capitalize on this resource," and the subsequent response of the Agency in the National Strategy for a Sustainable Trail System (2016). On the surface, the only enjoinder promulgated to agency staff and potential volunteers is to establish agreements for collaboration. However, the USDA FS Eastern Region Land and Resource Management Plan of 2006, provides the Forest Supervisor with policy tools (and processes) enabling extension to alignment within agreements, via amendment, mitigation, and compromise necessary for the establishment of mutually acceptable constraints. See pp. 1-9 and 1-10</p>	
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		in for an extended discussion of the conditions for which amendment and compromise is possible.	
68-5	Randall Pflueger 8/26/2019	Systematic alignment of objectives is a way of pricing in, at the onset of a cooperative agreement to support trails, the cost of maintaining coherence between volunteers and an agency. In this context cost is not necessarily monetary, rather, cost resides in the framework of mutually acceptable constraints which allows each stakeholder to achieve their objectives while upholding the cooperative agreement. USFS policy bearing on cooperative agreements provides administrative (sic) tools, and incorporates corrective processes, for setting coherent, mutually acceptable constraints as a necessary foundation for reaching an alignment of expectations consistent with sustainability. The KHTA is interested in finding and exercising similar provisions in IN-DoF policy, to set mutually agreeable constraints for maintaining the KT in Indiana State Forests.	See response to comment 68-3 above.
68-6	Randall Pflueger 8/26/2019	Being a trail organization, the KHTA is the natural advocate for the integrity of the Knobstone Trail, for the hiking experience, and for the volunteer corps which it (in the role of VOG,) is charged with recruiting, training, and coordinating.	See response to comment 68-3 above.
68-7	Randall Pflueger 8/26/2019	Properly planned corridors preserve the hiking experience, and were intended to be an integral part of the Knobstone Trail as it was extended the entire length envisioned by IN-DNR. Only with a corridor can the character of the KT be preserved to provide "a safe, national-caliber hiking experience for those traveling the Knobstone..." "...a minimum width of 1,320 feet (quarter-mile) is desirable. This would allow some flexibility in the actual layout of the trail. Land topography, vegetation, soils, and location of trail connections at each end may all require that flexibility. Purchasing areas wider than that would reduce the need for an expensive land survey. Less than a quarter-mile width would only (sic) be feasible for short distances and should only be acquired as a last resort. In no cases should less than fifty feet be accepted."	<p>The 2006 Hoosier National Forest Land and Resource Management Plan does not require a corridor around trails is required or necessary. The Forest Plan states, "Long-term visual goals are not necessarily negated by short-term disruption of visual character" (p. 2-4) The Visual Quality Objective for the project area is Modification. Forest Plan guidance for visual quality would be followed through project design measures (EA, Appendix A).</p> <p>The MOU between the Hoosier National Forest and the Knobstone Hiking Trail Association does not obligate the Hoosier National Forest to consider scenery management along the Knobstone Trail any differently than any other trail on the Forest.</p>

68-8	Randall Pflueger 8/26/2019	Agencies are incentivized, and directed, to manage forest assets for sustainability. Foremost among many reasons is cost. Once the intended character of the asset is defined in the agency Vision, one element of the Mission is to achieve and work within a manageable (sic), sustainable cost structure – as implied by discussion on page 12 in [7]. Recruitment of volunteers, enlisting of members, and coordinating partnerships among forest user groups, are all aided by corridors. Each user group benefits from increased membership, with the combined memberships providing a source of volunteers willing to commit to servicing the forest.	Comment noted.
68-9	Randall Pflueger 8/26/2019	<p>USFS and IDNR Division of Forestry leaders indicate increasing interest in leveraging volunteer support. From p.1 of [3], "Our goal is to ensure America's trails are ecologically sustainable and economically viable and that people value and support their trails on public lands. To achieve our goal, we are increasingly embracing and building upon the innovation and energy of partners, volunteers, friends, agency leaders, and employees seeking out new relationships and new solutions. With the passage of the National Forest System Trails Stewardship Act in November 2016, the time for bold solutions is now."</p> <p>Recently, in relation to the IN-DoF 2020 State Forest Action Plan, "this Forest Action Plan effort is really about leveraging our collective resources toward shared goals that benefit the forests (private, public and urban) of Indiana," – excerpted from Chris Gonso email to Stewardship Committee Members, dated 1 July 2019, and "It is with your assistance and cooperation that the Forest Action Plan will be an effective guide to leveraging our scarce resources for Indiana forest conservation in the coming ten years" – excerpted from April, 2019 letter to Forest Conservation & Stewardship Partners from State Forester Jack Siefert.</p>	<p>See response to comment 68-3 above.</p> <p>The IN-DoF 2020 State Forest Action Plan is not relevant to the Proposed Action.</p>

68-10	Randall Pflueger 8/26/2019	<p>The KT is near to being completed in the state forests of Indiana, and is complete in the Hoosier National Forest. Institutionalizing sustainability is critical to establishing the KT as a national-class trail and as a monetizable asset stretching from Martinsville to near the Ohio River. Sustainability supports opportunity but presents a risk if it is not explicitly institutionalized. With the prospect of the Houston South Management Project, and other management interventions, diminishing the KT or limiting the growth of the hiking asset, the KHTA is requesting that at this time the trail, and the hiking experience, be preserved by a corridor which is not subjected to management intervention. It is through this means that the pool of skilled, committed volunteers necessary for sustainable support of the KT (and other HNF trails) will grow and be maintained.</p>	See response to comment 68-3 above.
69	Karen Smith 8/26/2019 (PR bb70)	<p>Given the project's large scale, 20-year time frame, and proposed management involving prescribed burns, timber harvesting (including clearcutting), and miles of road construction, I'm concerned about the potential for unexpected negative environmental consequences, especially in the context of a rapidly changing climate. Regarding timber harvesting, the EA states on pp. 57-58.</p> <p>Unfortunately, the EA is informed by the outdated 2006 Hoosier National Forest Land and Resource Management Plan (Forest Plan) and does not discuss new climate change projections, such as the 2018 Intergovernmental Panel on Climate Change (IPCC) special report. The latter warns we have only a twelve-year window to keep global warming to a maximum of 1.5°C in order to avoid the most devastating environmental and social impacts. As stated by Hans-Otto Pörtner, Co-Chair of IPCC Working Group II, quoted in an IPCC press release: "Every extra bit of warming matters, especially since warming of 1.5°C or higher increases the risk associated with long-lasting or irreversible changes, such as the loss of some</p>	<p>Our Houston South analysis modeled data on the Hoosier and in the Houston South project. Our model showed the Hoosier becoming carbon neutral and perhaps even a carbon source if no management occurs. Please refer to Forest Carbon Assessment for the Hoosier National Forest in the Eastern Region at: https://www.fs.usda.gov/nfs/11558/www/nepa/110474_F_SPLT3_4670167.pdf</p> <p>This proposed action is consistent with internationally recognized climate change adaptation and mitigation practices. Please refer to Project Scale Carbon Effects – Houston South Project Environmental Assessment at: https://www.fs.usda.gov/nfs/11558/www/nepa/110474_F_SPLT3_4670166.pdf</p> <p>Site-specific carbon and greenhouse gas emissions were analyzed in the <i>Project Scale Carbon Effects – Houston South Project Environmental Assessment</i> and summarized in the EA.</p>

		<p>ecosystems.” Debra Roberts, Co-Chair of IPCC Working Group II, is also quoted: “This report gives policymakers and practitioners the information they need to make decisions that tackle climate change while considering local context and people’s needs. The next few years are probably the most important in our history” https://www.ipcc.ch/site/assets/uploads/2018/11/pr_181008_P48_spm_en.pdf).</p> <p>Indiana’s Future Forests: A Report from the Indiana Climate Change Impacts Assessment (2018) notes: “Predicting the future of a complex ecosystem with hundreds of interacting species is challenging, even under stable conditions. But conditions are not stable. Indiana’s forests are living through simultaneous changes in climate, the concentration of carbon dioxide (CO₂) in the atmosphere, exposure to atmospheric pollutants that can damage or fertilize trees, management practices and other factors. Even a single change, such as an increase in temperature, has consequences that ripple through the system” https://ag.purdue.edu/indianacclimate/forest-ecosystems-report/).</p> <p>The Purdue report mentions several key findings, including expected increases in spring flooding and summer drought; changes in forest composition; longer growing seasons that may benefit seedling establishment, while increased precipitation and flooding could inhibit their growth; the possible increase in new invasive species moving northward; fewer days with frozen soil, likely increasing “the risk of soil rutting and erosion from harvest activities on wet soil”; and changes in wildlife population densities due to changing forest composition.</p> <p>Question: Given that the Houston South project would be staged over a 20-year period—eight years beyond the predicted 12-year window for preventing global</p>	
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		warming beyond 1.5°C—and that the 2006 Forest Plan is outdated, will HNF consider more recent climate change reports and projections and refine its proposal in order to reduce potential for negative environmental consequences due to forest management activities?	
69-2	Karen Smith 8/26/2019	<p>A primary focus of proposed management activities is regeneration of the oak-hickory forest type, which “currently dominates canopies in the Houston South Project, covering 69 percent of all forested NFS land within the project boundary” (EA, p. 6). I noticed that the EA makes no reference to Sudden Oak Death (SOD), a disease caused by the pathogen <i>Phytophthora ramorum</i>, which was recently identified in rhododendron plants sold in Indiana. The Indiana Department of Natural Resources reports that SOD has killed large tracts of oaks on the West Coast but is not yet established in the Midwest (https://www.in.gov/dnr/entomolo/4532.htm). Local mitigation efforts have focused on infected rhododendrons; however, a Purdue University special alert dated May 28, 2019 notes that other foliar hosts include azalea, euonymus, lilac, viburnum, and groundcovers, like periwinkle (<i>Vinca minor</i>). It also states that “over 120 hosts in addition to oaks have been identified, and more continue to be added to this list. What is most unusual about sudden oak death is the severity of disease symptoms coupled with the broad host range of the pathogen. This leads to difficulty in diagnosing and managing this disease.” Additionally: “If the pathogen becomes established in Indiana, sudden oak death could change the structure of American forests and landscapes, just as emerald ash borer is currently doing, and how Dutch elm disease did 50 years ago, or the chestnut blight did 100 years ago” (https://www.purduelandscapereport.org/article/special-alert-sudden-oak-death/).</p> <p>Questions:</p>	<p>USDA Forest Service, Forest Health Protection, State and Private Forestry states:</p> <p>“The Eastern Region’s Forest Health Protection (FHP) staff has been monitoring the situation and remains in close communication with federal and state plant pest regulatory officials. The fungus-like organism <i>P. ramorum</i> is a federally regulated organism, and therefore the lead federal agency responding to these regulatory incidents is the USDA Animal and Plant Health Inspection Service, Plant Protection and Quarantine (APHIS-PPQ), in conjunction with plant pest regulatory officials in the state departments of agriculture. These agencies are well equipped to handle the current situation, as they did in 2011 when a similar incident occurred. At this time, we think there is very little threat to Midwestern oak forests.</p> <p>Infected nursery stock (rhododendrons) were found in several state “nursery establishments” (such as Walmart and other stores). Several retailers have initiated recalls, and APHIS has been working with state departments of agriculture to destroy infected or potentially infected material. FHP staff continues to stay in contact with state forest health and agriculture contacts throughout this developing event. SOD has not been found affecting any oak trees in Eastern or Midwestern states.”</p>

		<p>a. Has HNF considered the impact Sudden Oak Death could have on the success of forest management activities promoting oak regeneration should the disease become widespread in Indiana?</p> <p>b. As noted in the Purdue report: "Sudden oak death is most dangerous at the urban-forest interface, where forests meet with development...." Are any Best Management Practices (BMPs) in place to prevent potential spread of SOD via various foliar hosts from developed areas or private land near or within the project area?</p>	
69-3	Karen Smith 8/26/2019	<p>The Houston South EA notes on p. 33 that "selective herbicide applications are proposed for site preparation and stand improvement activities on 1,970 acres." In its discussion of the safety of proposed herbicides, it refers to the outdated Syracuse Environmental Research Associates (SERA) 2011 risk assessment.</p> <p>One of the proposed herbicides is glyphosate for cut-stump treatments on "undesirable native species," including sugar maple, red maple, and American beech. The EA does not discuss current controversy surrounding glyphosate's cancer-causing potential. A May 30, 2019 NPR report by Dan Charles titled "Safe or Scary? The Shifting Reputation of Glyphosate, AKA Roundup" mentions that the International Agency for Research on Cancer (IARC) announced on March 20, 2015 that glyphosate is "probably carcinogenic to humans," including "strong evidence" that glyphosate can damage cell DNA and "limited evidence" that humans exposed to the herbicide had higher rates of non-Hodgkin lymphoma. While the U.S. Environmental Protection Agency (EPA) concluded that glyphosate is probably not cancer-causing, the article notes that IARC based its conclusion only on studies that are publicly available, while "regulatory agencies like the EPA considered a large number of studies that aren't publicly available because Monsanto paid for them and submitted them to the agencies"</p>	<p>Glyphosate updated information: Please see response to comment 29-3. USDA supports the science-based risk assessments conducted by EPA.</p> <p>The most recent USGS estimation for agricultural use of glyphosate in southern Indiana was equal or greater than 88.06 lb/sq mi. Taking the minimal amount (88.06) and assuming it was the average rate applied to the 2,600 acres of agricultural fields in the Houston South project area, equates to a total minimum input of 89.0 gallons of glyphosate in the project area per year.</p> <p>Meanwhile, the USFS is proposing to treat over 400,000 stems of undesirable trees within the project area with three different herbicides (triclopyr, imazapyr, glyphosate). Glyphosate is not likely to be the preferred herbicide for these treatments, but for this scenario we will assume 1/3 of stems will be treated with glyphosate. This calculation shows that the maximum amount of glyphosate to be applied for silvicultural purposes in the Houston South project area is 7 gallons per year. These applications were calculated assuming a 10-year period for project implementation.</p> <p>Important items to remember when comparing these numbers: Agricultural lands primarily use broadcast or foliar applications, which allow drift and more herbicide to reach soils. Of the 2,600 acres of agricultural land within</p>

	<p>(https://www.npr.org/sections/thesalt/2019/05/30/727914874/safe-or-scary-the-shifting-reputation-of-glyphosate-aka-roundup).</p> <p>The EA also makes no mention of the more than 13,000 lawsuits filed against Monsanto, maker of the glyphosate-based herbicide Roundup. A May 13, 2019 article by Richard Gonzales (NPR) notes a recent court case in Alameda County, CA, in which the jury concluded that a couple “contracted non-Hodgkin's lymphoma because of their use of the glyphosate-based herbicide,” awarding them each \$1 billion in punitive damages and \$55 million in collective compensatory damages. Regarding two earlier lawsuits, the article states: “In March, a San Francisco jury awarded \$80 million to a man who blamed his cancer on his extensive use of Roundup. In August 2018, another San Francisco jury awarded \$289 million to a fourth plaintiff. On appeal a judge later slashed that payout to \$78 million” (https://www.npr.org/2019/05/13/723056453/california-jury-awards-2-billion-to-couple-in-roundup-weed-killer-cancer-trial).</p> <p>I am also concerned about cumulative effects of herbicide use in the project area. As noted in the EA on p. 37: “Within the project boundary there are an estimated 2,600 acres of agricultural land on private ground. It is safe to assume that herbicides are used on much of this land either to spot-treat pastures or to treat entire fields, sometimes multiple times each year. These applications are not considered because it is unlikely that herbicides applied on NFS lands would translocate sufficiently to combine with them....” However, as noted in the U.S. Army Corps of Engineers’ June 2017 Draft Environmental Assessment for the Monroe Lake Master Plan, Salt Creek, Indiana on p. 35:</p> <p>NEPA requires a Federal agency to consider not</p>	<p>the project area, it is calculated that over 40% is within floodplain areas, increasing applied herbicide’s potential to reach streams.</p> <p>USFS silvicultural treatments would occur as selective treatments (directly placing herbicide on the cambial tissue of trees), no foliar or broadcast application would be used. Additionally, no treatments are planned within floodplain areas. Both factors reduce the potential for herbicide to reach streams in the project area.</p>
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		<p>only the direct and indirect impacts of a proposed action, but also the cumulative impact of the action. A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR§1508.7).” Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. These actions include on- or off-site projects conducted by government agencies, businesses, or individuals that are within the spatial and temporal boundaries of the actions considered.</p> <p>Questions:</p> <ol style="list-style-type: none"> Why does the EA not discuss recent studies and lawsuits regarding glyphosate exposure and cancer in humans? How can HNF NOT consider herbicide applications on agricultural land within the project area and conclude that there are no cumulative effects when it hasn’t investigated the extent or type of herbicide use on these non-NFS properties? 	
69-4	Karen Smith 8/26/2019	<p>The proposed Houston South project would involve prescribed burning on approximately 9,700 to 13,500 acres over a 20-year period, averaging about 1,500 acres per year. Construction of fire lines prior to burning would involve the use of mowers, chainsaws and leaf blowers (EA, p. 16), equipment producing loud noises that have potential negative impacts on wildlife, the subject of numerous recent scientific studies.</p> <p>A National Park Service article titled “Effects of Noise on Wildlife” notes that “sound, just like the availability of nesting materials or food sources, plays an important role in the ecosystem. Activities such as finding desirable habitat and mates, avoiding</p>	<p>The referenced articles focus on long-term impacts from traffic noise.</p> <p>The Forest Plan EIS (USDA FS 2006b) page 3-306 states: “Noise associated with site preparations, planting, and timber harvest would be local and of short duration.”</p> <p>The effects on wildlife due to noise would be limited. Wildlife in the area have ample amounts of adjacent forest for wildlife to temporarily re-locate if they are disturbed. There should not be any long-term negative impacts from temporary noise on wildlife that may occur in the area.</p>

		<p>predators, protecting young, and establishing territories are all dependent on the acoustical environment. In order to continue with these activities, animals are being forced to adapt to increasing noise levels.” The conclusion is that “increasingly, careful consideration of the impacts of human-generated noise on wildlife is a critical component of management for healthy ecosystems in our parks” (https://www.nps.gov/subjects/sound/effects_wildlife.htm).</p> <p>When I attended the HNF open house at Monroe County Public Library on August 7th, I mentioned the issue of noise pollution to one of the foresters and asked him what types of chainsaws and leaf blowers would likely be used for the project. He mentioned the following models, next to which I have listed their sound power levels and/or sound pressure levels:</p> <ul style="list-style-type: none"> • Stihl BR 600 leaf blower: Sound pressure rating = 75 dB(A) • Stihl MS 440 chainsaw: Sound pressure level = 101 dB(A); Sound power level = 112 dB(A) • Stihl MS 460 chainsaw: Sound pressure level = 101 dB(A); Sound power level = 113 dB(A) • Husqvarna 372 XP chainsaw: Sound pressure level at operator’s ear = 103 dB(A); Sound power level, guaranteed (LWA) = 115 dB(A); Sound power level, measured = 114 dB(A) <p>A Federal Highway Administration webpage at https://www.fhwa.dot.gov/ENVIRONMENT/noise/noise_effect_on_wildlife/effects/wild04.cfm discusses noise effects on wildlife and summarizes the sensitivities of various groups as follows:</p> <ul style="list-style-type: none"> • Mammals < 10 Hz to 150 kHz; sensitivity to -20 dB • Birds (more uniform than mammals) 100 Hz to 8-10 kHz; sensitivity at 0-10 dB • Reptiles (poorer than birds) 50 Hz to 2 kHz; sensitivity at 40-50 dB 	
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		<ul style="list-style-type: none"> • Amphibians 100 Hz to 2 kHz; sensitivity from 10-60 dB <p>The paragraph following the above summary states:</p> <p>Animals rely on meaningful sounds for communication, navigation, avoiding danger and finding food against a background of noise. Here noise is defined as “any human sound that alters the behavior of animals or interferes with their functioning”. (16) The level of disturbance may be qualified as damage (harming health, reproduction, survivorship, habitat use, distribution, abundance or genetic distribution) or disturbance (causing a detectable change in behavior)</p> <p>Comparing the sound levels to which various animals are sensitive with the sound levels produced by chainsaws and leaf blowers used in forest management would seem to suggest that the noise produced by such equipment could indeed cause damage or disturbance to wildlife.</p> <p>Question:</p> <ol style="list-style-type: none"> a. Has the USFS studied adverse impacts to wildlife due to loud noises produced by equipment used in forest management? b. If yes, can HNF consider any steps to mitigate damage or disturbance to wildlife due to such noise? 	
69-5	Karen Smith 8/26/2019	<p>I am also concerned about potential negative impacts on native wildlife, including the Timber Rattlesnake, due to use of prescribed fire. The EA states the following on pp. 42-43:</p> <p>Prescribed fires pose a threat for the timber rattlesnake adjacent to hibernacula; therefore, the Houston South Project may impact the timber rattlesnake. Due to this species being listed as apparently secure (NatureServe 2019), few sightings in the area, design criteria and the availability of existing cover habitat adjacent to the project area,</p>	<p>The Timber Rattlesnake is on the Hoosier National Forest's Regional Forester Sensitive Species (RFSS) list and was analyzed in the RFSS Biological Evaluation.</p> <p>Regional Forester sensitive species are designated and considered to be at risk, if they:</p> <ul style="list-style-type: none"> • Are candidates for listing under the Endangered Species Act; • Have been delisted under the Endangered Species Act within the last five years; • Have NatureServe Global, Trinomial, National Ranks of G1-G3, T1-T3, N1-N3;

		<p>there should be no trend toward federal listing to this species from implementation of this project.</p> <p>It is important to clarify that the NatureServe site lists global and national status of the Timber Rattlesnake (<i>Crotalus horridus</i>) as “Apparently Secure” or G4 and N4 respectively. However, the Indiana County Endangered, Threatened and Rare Species List at https://www.in.gov/dnr/naturepreserve/4666.htm lists the species as S2 (Imperiled in State) and SE (State Endangered). This is important to me, as I don’t want the Timber Rattlesnake to disappear from Indiana, regardless of its larger distribution.</p> <p>Questions:</p> <p>a. Why does the EA not consider the state conservation status of the Timber Rattlesnake in its analysis?</p> <p>b. Will HNF make any changes in its management proposal to help protect Timber Rattlesnake habitat or potential habitat in the project area?</p>	<ul style="list-style-type: none"> • Or are considered to be at risk based upon their state status ranks (S1-S2) and their respective forest risk evaluation. <p>Forest Service Manual 2670 provides direction for sensitive species protection and management. The primary purpose of this direction is to be proactive and prevent each species from any loss of viability and ensure that any actions are not likely to cause a trend towards that species being listed as Federally endangered or threatened (Forest Plan p. C-5)</p> <p>The effects to wildlife on the Regional Foresters sensitive species list were analyzed in the Biological Evaluation for Regional Foresters Sensitive Species and summarized in the EA.</p> <p>The project wildlife biologist determined the Houston South Project “may impact” the timber rattlesnake, but here should be no trend toward federal listing and no negative cumulative effects to this species from implementation of this project.</p> <p>The BE recognized that rattlesnakes are most vulnerable to fire soon after they emerge from winter hibernacula, thus early growing-season fire poses a risk to rattlesnakes. This led to the project design measure of “Dates of prescribed burning and fire line placement may need re-evaluated based on future sensitive species research findings. Coordinate with the wildlife biologist on current findings” (EA Appendix A).</p>
69-6	Karen Smith 8/26/2019	<p>I and many other citizens are worried about HNF plans to clearcut 401 acres of pine on slopes in the Salt Fork Salt Creek watershed, which is part of the larger Lake Monroe watershed. With expected increases in precipitation and flooding, there is increased risk of erosion and sedimentation due to harvesting activities, which could negatively impact local water quality. As a Bloomington resident, I am especially concerned since Lake Monroe is our city’s main source of drinking</p>	<p>On page 24 of the EA it states, “all clearcuts are proposed on lesser-sloped ground, which should reduce risk of slumps and slides.” The EA goes on to say “The Houston South Project proposes 401 acres of clearcut, 0.6 percent of the South Fork Salt Creek watershed. Best Management Practices (BMPs) are implemented for any harvesting activity on the Hoosier. These BMPs are monitored annually to check for efficiency in reducing erosion.”</p>

		<p>water. It is also possible that new hardwood seedlings would have difficulty becoming established in the clearcut area due to wetter-than-normal conditions in the near future.</p> <p>Question: Since there is clearly an unresolved conflict regarding the wisdom of clearcutting on the 401 acres mentioned in the EA, would HNF consider alternatives, such as a different location within the project area and/or a different timber harvest practice for oak-hickory regeneration?</p>	<p>The Forest has not observed difficulties in new hardwood seedlings becoming established in recent clearcuts on the Forest. The Forest Service is required by the National Forest Management Act to certify stands as regenerated within five years. The Hoosier routinely is able to do this at year three.</p> <p>Clearcutting is not an unresolved conflict because the Forest Plan allows for clearcuts in Management Area 2.8 and site-specific soil and water effects were analyzed in the <i>Report for the Houston South Restoration Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>Clearcuts are proposed in the nonnative pine stands. The Forest Plan states, "Clearcuts will be used when they are the optimum harvest method to achieve our stated management objectives such as conversion of pine to hardwood or meet wildlife habitat composition objectives (p. B-8).</p>
69-7	Karen Smith 8/26/2019	<p>Given the extensive scope of the 20-year Houston South project, including 11.5 miles of new or temporary road construction and 5 miles of road reconstruction, I fear that the project may literally be paving the way for increased logging in Hoosier National Forest over the coming years. We've seen this happen in Indiana's state forests, where commercial harvesting has increased by at least 300% since about 2005. The IDNR Division of Forestry's 2015-2019 Strategic Plan specifies that an average volume of 14 million board feet of timber be sold from state forests annually.</p> <p>It is also worrying that the USFS proposed policy changes last month that would eliminate rights and protections guaranteed under NEPA, allowing it to bypass public input and environmental review for the majority of its national forest projects. In fact, today I submitted comments to USFS in opposition to its</p>	<p>The question is difficult to answer with respect to coming decades. At some point in the future, a Forest Plan Revision will occur. We do not know what guidance will come from a new Forest Plan. However, for the remaining projects under the current Forest Plan, the Allowable Sale Quantity (ASQ) will not increase.</p> <p>Regarding changes to Forest Service NEPA regulations (36 CFR 220), we won't know what changes occur until the final notice is released. Please note that there are no plans to change 36 CFR 218. These regulations require a 30-day comment period for an EA and a 45-day comment period for an EIS. 36 CFR 218 also requires a 45-day objection period.</p>

		<p>undemocratic proposal. I believe citizens should have a say regarding public land management and decisions affecting their communities.</p> <p>Question: Does HNF foresee an increase in timber sales and related management activity in the Hoosier National Forest over the coming decades?</p>	
69-8	Karen Smith 8/26/2019	<p>One question I brought up with several HNF representatives at the August 7th open house in Bloomington was whether or not HNF would increase staffing to oversee the Houston South project and to what extent outside contractors are supervised by HNF personnel to ensure compliance with BMPs. The replies indicated that additional staffing was unlikely, which is troubling for a large-scale project including timber harvesting, road construction, prescribed burns, and herbicide treatments, any or all of which could have negative environmental impacts even if properly implemented. For example, the EA acknowledges that ground disturbance due to management activities will likely cause spread of non-native invasive species (NNIS). A changing climate, with the likelihood of more precipitation and flooding, could also magnify the usual impacts of vegetation removal and use of heavy equipment.</p> <p>Questions:</p> <ol style="list-style-type: none"> Does HNF plan on hiring additional staff to oversee the Houston South project? How often would HNF staff be on site to monitor compliance with BMPs? For example, how often would HNF staff check that equipment has been cleaned prior to implementation in order to help prevent spread of NNIS? After reading the EA, I am uncertain what BMPs and monitoring are in place to protect Lake Monroe water quality, which is very significant since the South Fork Salt Creek watershed is part of the larger Lake Monroe watershed, both of which are already compromised. Could you provide 	<p>Hiring additional staff to oversee the Houston South project is probably unlikely. The Forest has two employees that perform sale administration, plus two more harvest inspectors that have contract authority. In addition, the engineering technician has contract authority on roads. That is 5 on-the-ground personnel with contract authority, plus the Contracting Officer overseeing the contract that are monitoring ground conditions.</p> <p>We check every single piece of off-road equipment that enters the sale for cleanliness prior to allowing it to work on the sale. Pieces that are not cleaned thoroughly, or pieces that were not cleared by us prior to working on the sale would be sent off sale and made to clean before allowing back on National Forest System land.</p> <p>Monitoring is discussed on pages 22 - 24, and 26 - 27 of the EA. Project design measures were developed to reduce any potential negative impacts of the project (EA, Appendix A).</p> <p>The Forest Plan (USDA FS 2006a) has many management requirements that address soil disturbance and water quality risks that can be identified and used at the project level to reduce them (pp. 3-13 to 3-16).</p> <p>State-wide BMPs can be found at: https://www.in.gov/dnr/forestry/files/fo-2005_Forestry_BMP_Field_Guide.pdf</p>

		clarification?	<p>Forest Plan standards and guidelines (USDA 2006a) and statewide best management practices (BMPs) are required of implementers of the project.</p> <p>The Forest Service follows BMP monitoring guidelines to protect water quality using the National Best Management Practices for Water Quality Management on National Forest System Lands Technical Guide (USDA FS 2012).</p>
69-9	Karen Smith 8/26/2019	As reflected by the above questions and doubtless many others that HNF will receive regarding the proposed Houston South project, there are many unresolved conflicts that local citizens insist must be addressed. In particular, it is clear that “No Significant Impact” cannot be reasonably guaranteed unless HNF has a sufficient number of trained forestry staff to oversee all aspects of the project and ensure compliance with Best Management Practices, something which has not always happened in the past.	<p>This project is consistent with and implements the Forest Plan (USDA FS 2006a). The use of resources is addressed in the EA, the Forest Plan and the Forest Plan EIS. Coupled with the No Action Alternative, there are no unresolved conflicts.</p> <p>The Forest has a sufficient number of trained personnel to oversee all aspects of the project and ensure compliance with Best Management Practices.</p>
70	Lana Eisenberg 8/26/2019 (PR bb71)	<p>I feel strongly that the preservation of the water quality of the Lake Monroe watershed should be a preeminent concern of the management of the Hoosier National Forest. If there are to be experiments made to transition to native hardwood from non-native pine, they should be done in an alternative location that does not threaten our water supply.</p> <p>I also strongly oppose the proposed rule change that would limit public comments about projects proposed by the U.S. Forest Service. Public land management should be subject to review by the public.</p>	<p>There is nothing experimental about the proposed action. This project is consistent with and implements the Forest Plan (USDA FS 2006a).</p> <p>Please see the second paragraph in response to comment 69-7 regarding the proposed rule change.</p>
71	John Duffy 8/26/2019 (PR bb72)	Please do not go through with the Houston South project. Please don't cut our forest. Please don't eliminate more habitat that our local wildlife needs. Please do not eliminate more of the large trees our local and global climate need. Please do not put lake Monroe at greater risk of erosion and algae bloom.	This project is consistent with, and implements, the Forest Plan's Desired Condition of Management Area 2.8 (USDA FS 2006a). Effects were analyzed in individual Specialists Reports and Biological Evaluations and summarized in the EA.
71-2	John Duffy 8/26/2019	I live in this region for one reason: the forests. There aren't too many places left east of the Mississippi River where we can find something almost wild. This is our	See response to comment 69-8.

		heritage, it is what we pass to our children. Please let it be. Please let it grow and find its own fecund way. Please don't open more canopy while bringing in heavy machinery that inevitably carries the seeds of invasive plants in the caked on mud trapped about its treads and chasis (sic).	
71-3	John Duffy 8/26/2019	There are a lot of Hoosiers who desperately love these woodlands, and we want them to expand in size and capacity to house and cradle wildlife. Please do not go forth with the Houston South project.	Please see response to comment 71.
72	Jeff Stant IFA 8/26/2019 (PR bb74)	<p>This project will have a significant impact on the quality of the human and natural environment. A review of the ten "elements" or "factors" in the federal Council of Environmental Quality regulations that agencies use to decide whether a project has a significant impact readily reveals this to be the case.</p> <p>The first factor, "Impacts may be both beneficial and adverse" clearly applies. The DEA states repeatedly from beginning to end that the project will address a major problem occurring from the natural conversion of the oak-hickory forest at Houston South to a more mesic forest. Over and over and over, it touts the benefits of logging as much as 4,375 acres, burning as much as 13,500 acres, many of those acres repeatedly, and applying several herbicides to as much as 1,970 acres to derive what the DEA calls major benefits of restoring and maintaining the oak-hickory forest type. It touts purported benefits that will accrue too declining early successional wildlife from the project.</p> <p>On the other hand, research has heavily documented that the substantial amounts of edge and early successional habitat into interior forests will cause major adverse impacts to forest-dependent song birds several of which are state-listed species of special concern or state endangered and may also be Regional Forester Sensitive Species.</p>	<p>Please see response to comment 46-12 regarding edge habitat.</p> <p>Roberts and King (2017) state, "Many bird species that breed in early-successional vegetation are currently experiencing population declines in eastern North America (Askins 1993, Hunter et al. 2001, Sauer et al.2014). These negative trends are in part attributed to the loss of required disturbance-dependent early successional vegetation (Litvaitis 1993, Askins 2001, Thompson and Degraaf 2001, King and Schlossberg 2014)..."</p> <p>Effects to aquatic resources was analyzed the <i>Report for the Houston South Restoration Environmental Assessment: Effects to Aquatic Resources</i> and summarized in the EA on page 25.</p> <p>Moist riparian areas do not carry fire well and would likely remain unburned.</p> <p>The smoky shrew and pygmy shrew have no known occurrence on the Hoosier National Forest, thus are not included on the Regional Forester Sensitive Species list.</p> <p>Indiana DNR Heritage Database shows four occurrences of smoky shrew within the HNF boundary (one on non-FS land) from 1983. It also shows three occurrences of pygmy shrew (one on non-FS) from 1983. Two are from same sites as smoky shrews. Plus, there's a record from</p>

	<p>Research documents that the cutting and, depending upon when it is carried out, the burning over as much as 13,000 acres will have potentially major adverse impacts on amphibians such as the wood frog and many salamanders and reptiles such as the Eastern box turtle, a state-listed species of special concern and timber rattlesnake, a state endangered species. Seven timber rattlesnakes have been found in two months of this summer in the Ecoblitz, an IFA-sponsored comprehensive inventory of 11 taxonomic groups of species on a 734-acre tract of National Forest System (NFS) land that starts approximately one mile north of the northern border of the Houston South project area. This inventory permitted by the US Forest Service (USFS) is examining similar mature interior forest to that which will be heavily altered in the nearby Houston South project area.</p> <p>Cutting and burning in the Houston South activities will degrade substantial areas of undisturbed, mature forest conditions that are essential to the smoky shrew and pygmy shrew. These are two state listed species of special concern likely to be in the project area, given their location documented to the north and south of the Houston South area in forests very similar in age and condition.</p> <p>The project will likely degrade summer roosting habitat for the Northern long-eared bat (NLEB) a federally listed threatened species. A male and a post lactating female NLEB were netted in surveys completed one month ago by biologists in the Ecoblitz on NFS land (Nebo Ridge) 2-3 miles from the northern boundary of the Houston South Project area. Biologists informed the US Forest Service (USFS) of these catches as well as the location of a maternity roost with the female NLEB and two young in the Nebo area. The biologists believe there is likely to be a maternity colony with multiple roosts for this species in this area of deep forests, the same habitat of which extends into the</p>	<p>1981. The last re-evaluation of RFSS was in 2017 so these observations are too old. Observations must to be from 1992 or newer.</p> <p>Eastern box turtle is not on the RFSS list because it is ranked as G5 (globally secure) and N5 (nationally secure) and its state status rank is SNR (status not ranked) for Indiana.</p> <p>Regarding timber rattlesnakes, please see response to comment 69-5.</p> <p>Regional Forester Sensitive Species (RFSS) were analyzed in the RFSS Biological Evaluation and summarized in the EA. The project biologist determined the proposed action would have a beneficial effect on four species; may impact individuals or habitat for seven species, but not likely to cause trend toward federal listing or reduce viability of a population or species; and no impact on the remaining RFSS.</p> <p>The proposed project would have no additional effects on the northern long-eared bat beyond those previously identified and evaluated in the 4(d) Rule for the Northern Long-Eared Bat Project (USDI FWS 2016).</p>
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72-2	Jeff Stant 8/26/2019	<p>The second factor, the degree to which the project impacts public health and safety, is a subject of reasonable debate given the extent of the area to be burned and the planned widespread use of herbicides (with stem treatments over an area as much as 3 square miles) that are characterized as having toxic effects on wildlife if misapplied and possibly even humans according to today's news media.</p>	<p>Herbicide applications are overseen by state licensed applicators. Herbicides would be applied by following the policies and regulations of the Office of the Indiana State Chemist (OISC). Plus, additional design measures (EA, Appendix A) would be followed to insure applicator and environmental safety. Proposed herbicide use is not widespread. Herbicide would be applied specifically to the trunks and stumps of targeted woody vegetation resulting in a relatively small area of application.</p> <p>Glyphosate and human health: see response to comment 28-3.</p>
72-3	Jeff Stant 8/26/2019	<p>The third factor for determining significance, unique characteristics of the geographic area, clearly applies. For two miles the project sits directly adjacent to the Charles Deem Wilderness, the only federal wilderness in the heavily-populated three state region of Ohio, Indiana and Illinois in America's industrial heartland. The burning slated to occur in this area along with possibly major rerouting and destruction of scenic waterfalls of Combs Creek to facilitate "aquatic organism passage" along Tower Ridge Road will likely cause much concern among the large numbers of users of the Deam Wilderness. Notwithstanding these controversial activities, the project area comprises part of the largest block of public forest in the lower midwestern US. It is most definitely in a very unique geographic area for this three-state region.</p>	<p>Prescribed fire is proposed in Management Area 2.4, 2.8, and 6.4. The Charles Deem Wilderness is in Management Area 5.1. The Forest Plan states, "The area primarily along the Tower Ridge Road and State Road 446 is not part of the Congressionally designated wilderness and will be managed under other management area guidance" (Forest Plan p. 3-34).</p> <p>The proposed aquatic organism passage is in Management Area 6.4. It would allow for upstream passage of native fish species as well as other aquatic organisms. Proper sized crossings also restore a more natural flow regime with less impedance. Natural flow regimes promote less excessive bank erosion and helps mitigate channel incision. We feel that a functioning aquatic ecosystem is more important than a human's perception of "scenic."</p>
72-4	Jeff Stant 8/26/2019	<p>The fourth factor, the degree to which the effects on the quality of the human environment are likely to highly controversial, also clearly suggest the project will have a significant impact. There is a substantial dispute about the effects of this project. The assertion</p>	<p>The commenter provides no supporting reasons why it is "breathtakingly false."</p> <p>This project is consistent with, and implements, the Forest Plan (USDA FS 2006a). Effects were analyzed in</p>

		on page 64 of DEA, that, “There is no known scientific controversy over the anticipated effects of the proposed activities”, is breathtakingly false and suggests that USFS staff have not researched the impacts of the activities they are proposing that substantively and/or lack appreciation for principles of forest ecology.	individual Specialists Reports and Biological Evaluations and summarized in the EA.
72-5	Jeff Stant 8/26/2019	<p>The fifth factor, the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks, suggests significant impacts from the project because despite multiple references to RFSS, the project Biological Evaluation and surveys of certain species or groups in DEA, there has been no comprehensive baseline inventory of the flora and fauna, including invertebrates, in the project area. Without such an inventory, USFS staff do not know what the impact of this project will be on many species of flora and fauna that likely do exist in the forests in the Houston South project area.</p> <p>The Indiana Forest Alliance (IFA) has initiated such an inventory of forest life in 2019 under a USFS Biological Research Permit issued in May, 2019 in 734 acres of closed-canopy forest approximately one mile north of the northern boundary of the Houston South Project Area. This is the second such inventory, known as an “Ecoblitz”, by IFA in partnership with scientists from 13 Indiana colleges and universities, and leaders and experts from organizations such as Hoosier Environmental Council, Indiana Plant and Wildflower Society, Indiana Mushroom Society, Hoosier Herpetological Society and the Indiana Academy of Science as well as biologists from consulting firms such as Environmental Solutions and Innovations. The inventory is identifying species in 11 taxonomic groups to characterize the biodiversity that exists in the mature 100+ year old forests that have returned to Indiana’s state forests and the Hoosier National Forest.</p>	<p>As stated in the draft EA, projects with similar actions have been implemented on the Forest for many years. There are no unique or unusual effects for this project, which have not been previously encountered, which would constitute an unknown risk to the human environment.</p> <p>The proposed project has been analyzed and is in compliance with the National Environmental Policy Act, National Forest Management Act, Clean Air Act, Clean Water Act, Endangered Species Act, National Historic Preservation Act, and the Wilderness Act. It is consistent with the Executive Orders for Wetlands (11990), Floodplains (11988), Migratory Birds (13186), and Environmental Justice (12898) (EA, Project Record).</p> <p>The proposed project is consistent with, and implements, the Forest Plan (USDA FS 2006a).</p>

		<p>The first Ecoblitz inventory was concluded in 2018 in the Yellowwood/Morgan-Monroe State Forest Back Country Area. Two peer-reviewed reports on the lichens and spiders identified from this first inventory have been published in the Proceedings of the Indiana Academy of Science. Peer-reviewed reports on forest pollinators and the overall results from all surveys at the Yellowwood BCA site as well as the structure and character of the forest and its vascular plant community will be published this fall.</p> <p>These reports are establishing that scientists and land managers still have much to learn about the life that exists in the maturing forests on southern Indiana's public lands. For example, arachnologist identified some 24 species of spiders never before seen in Indiana among a total of 125 species of spiders they found in the Yellowwood BCA. Among the 104 species of lichen identified by Dr. James Landemer, lichenologist from the New York Botanical Garden, 64 had never before been seen in the state. This may be because no survey of lichens had been undertaken in Indiana for 75 years before this survey was conducted. Similarly, the survey of forest pollinators, bees, at Yellowwood was the first survey of forest pollinators ever undertaken in a forest in Indiana, and it appears to have found nearly one quarter of all bees ever seen in the state, many during parts of the summer when there were few flowers evident in the forest for pollinating.</p> <p>One of the primary hurdles to producing the overall species count and final report from the Yellowwood/Morgan-Monroe BCA ecoblitz has also been the voluminous number of insect specimens that need to be identified from surveys of the Yellowwood tract. A year ago, the insect species count being spearheaded by Dr. Glene Mynhardt at Hanover College, had exceeded 2,000 distinct species. More than 1,000 moths have been identified with the final</p>	
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		<p>count likely to surpass 1,200 once identifications are completed this October. Hundreds of beetles, flies, and wasps have been found, but Dr. Mynhardt and other entomologists are unable to identify many specimens to the genus let alone species level. This is because there are no experts for many of the families and genres of insects that live in this 100 + year old forest. For example, some 183 ichneumonid wasps have been identified as morphospecies (distinct but unidentified) but without any experts or keys for the largest family of these parasitic wasps in North America, scientists cannot identify their genus or species. Given each of these wasps has its own distinct host, there are many ecological relationships between the wasps and their hosts that experts have not charted that may have profound impacts on the structure and health of this forest.</p> <p>Cores of 48 trees taken by two dendrochronologists revealed ages of dominant hardwood trees in the Yellowwood BCA ranging from 91 to 234 years with an average age of 121 years. Eleven log profiles corroborated these ages further. These ages appear to be similar in age to the older age classes of hardwood trees in the forests described in the DEA for the Houston South project area and the Pleasant Run Purchase Unit in Figures 3 & 4 on page 5. We are concerned that the Forest Service has not inventoried and therefore does not understand or appreciate the depth and diversity of life in the maturing hardwood forest that they are proposing to substantially impact and alter in the Houston South project.</p>	
72-6	Jeff Stant 8/26/2019	The sixth factor, the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration, will be very significant if the USFS decides to move ahead with this ambitious level of burning over as much as 13,500 acres and doing so repeatedly over the next 20 years. Taking such actions to sustain a forest type that will not sustain itself	There will be more projects in the future as the Forest continues to implement the Forest Plan. However, each decision will be based on the results of a site-specific environmental analysis conducted in accordance with the National Environmental Policy Act.

		naturally in this region (according to the agency) at a time when our climate is changing rapidly because of human-induced carbon emissions, threatening life on earth as we know it, could set an extremely destructive precedent if the USFS presumably intends to take this course over other areas of the HNF. We note that most management areas on the HNF could allow for this course to be taken under the current Land and Resource Management Plan.	
72-7	Jeff Stant 8/26/2019	<p>The seventh factor, whether the action is related to other actions with individually insignificant but cumulatively significant impacts, gets at the essence of our concerns over this project. The CEQ's requirements further explain, "Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. The DEA downplays and in some instances appears to be oblivious to this project's potential impacts on suspended solids and sediment in Monroe Reservoir, on the erosion of interior forest habitat in the only large island of deep forest in the state, on declining bats, forest songbirds, salamanders, shrews and so many other species of life that haven't even been checked for, on the impacts of continual low level but widespread burning on carbon emissions. They apparently don't appear to be significant to the USFS, but taken with all the other impacts to these species and our biosphere and forests from what is occurring on other public forest lands in Indiana as well as the 85 percent of Indiana that is privately owned, they are cumulatively very significant.</p> <p>We believe the loss of significant scientific resources included in the eighth factor will be significant, because there are so few acres of old growth forest in the HNF and Indiana and we know so little about how our old growth forests operate or will operate in today's rapidly changing climate. Forest stands in the Houston South</p>	<p>The spatial boundary used to evaluate indirect and cumulative impacts is the 10-digit hydrologic unit (HUC 10) South Fork Salt Creek watershed. This boundary permits the assessment of effects from any past, present, and reasonably foreseeable future projects that overlap in time and space with effects from the proposed action. Cumulative effects beyond the watershed boundary diminish below measurable levels and cannot be meaningfully evaluated.</p> <p>The Forest Plan EIS Page 3-99 shows that under the selected alternative (of the EIS), 81% of the Hoosier will be mature hardwood. This habitat type will still be provided on the Forest.</p>

		area that are only 3-4 decades (the 13% of the acres in Table 1 on page 6 of the DEA that are 110 years old or older) from becoming secondary old growth forests, could be set back from reaching that condition for more than another century.	
72-8	Jeff Stant 8/26/2019	<p>Regarding the ninth factor, the degree to which the project may adversely affect a federally listed endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act, we note that this summer's survey has determined that HNF has critical habitat for the Northern long-eared bat (NLEB) in direct contradiction to the statement in the DEA on this factor. Biologists located a maternity roost within 2-3 miles of the northern boundary of the Houston South area. They believe it is part of a maternity roost colony for this species and will be reporting their survey results to the USFS this fall.</p> <p>Furthermore, three years of bat surveys in the Ecoblitz inventory of the Yellowwood/Morgan-Monroe Back Country Area found two maternity roosts of the endangered Indiana Bat in what biologist believe is a maternity colony for this species, two lactating female NLEB's, and one immature tricolored bat along with many red and big brown bats. We also collected ample acoustic evidence of little brown bats, evening bats and hoary bats. All of these species and the roosts of the Indiana bats were found or detected acoustically in older mature forests that had undergone no silviculture or burning since before they were acquired by these state forests. We also note the declines of greater than 70 percent and 90 percent in winter hibernacula counts for tricolored and little brown bats in Indiana as of 2017/2018, species that are in various stages of consideration for listing under the ESA. Regardless of their listing status, we urge the USFS to work proactively to safeguard as much summer foraging and roosting habitat as possible for the NLEB, tricolored and little brown bat given their precipitous</p>	<p>Effects to listed bat species were analyzed in the Biological Evaluation for Threatened and Endangered Species and summarized in the EA.</p> <p>The proposed project would have no additional effects on the northern long-eared bat beyond those previously identified and evaluated in the 4(d) Rule for the Northern Long-Eared Bat Project (USDI FWS 2016).</p> <p>The Hoosier is in consultation with USDI Fish and Wildlife Service to verify the project would have no additional effects on the Indiana bat beyond those previously identified and evaluated in the Hoosier National Forest Programmatic Biological Assessment (USDA FS 2005) and the USDI Fish and Wildlife Service Biological Opinion of the Hoosier National Forest Land and Resource Management Plan (USDI FWS 2006).</p> <p>The three bats on the RFSS list were analyzed in the Biological Evaluation for Regional Foresters Sensitive Species and summarized in the EA.</p> <p>Critical habitat is designated by the USDI Fish and Wildlife Service. There is no designated critical habitat for the Indiana bat on the Hoosier National Forest.</p> <p>Forest Plan standards and guidelines would reduce the likelihood of forest management actions having a negative impact on Indiana bats or NLEB. Maintaining, enhancing or restoring sustainable ecosystems, including open woodlands, closed woodlands and upland forest would likely create diverse habitats suitable for roosting and foraging for both Indiana bats and NLEB and be beneficial in the long-term.</p>

		declines. The agency has the authority and discretion to do so.	
72-9	Jeff Stant 8/26/2019	<p>Regarding the tenth factor, whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment, we are concerned that this project as proposed will violate the anti-degradation requirements of the federal Clean Water Act, which do not allow for additional loads of a pollutant to be discharged to waters of the US already impaired by that pollutant. This violation is suggested by the lax monitoring and at best, vague clear corrective action standards for control of turbidity, Total Suspended Solids and sediment discussed in the DEA.</p> <p>Given the substantial evidence that this project readily meets multiple factors in the CEQ regulations that define its impact as “significant”, we also believe a decision to proceed forward with the project as presented in the DEA should be accompanied by a full Environmental Impact Statement which examines an adequate range of alternatives if the project is to comply with NEPA.</p>	<p>Regarding the Clean Water Act, see response to comment 20-2.</p> <p>The EA summarizes the potential site-specific effects identified and analyzed during project development and through public involvement. The project EA is appropriately tiered (40 C.F.R. 1508.28) to the programmatic discussion of vegetation management in the programmatic EIS prepared for the Forest Plan. The Houston South Vegetation Management and Restoration Project (Houston South Project) EA discloses the site-specific effects to wildlife, soil, water, recreation, and other resources. The decision documentation will incorporate the analysis set forth in the EA and is informed by the specific discussions included in the EA and referenced documents in the Project Record. The Responsible Official will base her decision on the entirety of the Houston South Project which shows the use of current and relevant scientific methods and policy. The draft DN/FONSI considers the context and intensity factors of 40 C.F.R. 1508.27 and documents the findings of the Responsible Official that the Houston South Project contains no significant effects that trigger the need to prepare an EIS.</p>
72-10	Jeff Stant 8/26/2019	The purpose and need for the project have not been adequately justified given the substantive harm it could cause to the drinking water supply for Monroe and Brown Counties. Assertions in the DEA of the need for logging, prescribed fire and herbicides to restore and maintain the ecological health of the forest in this area are unsubstantiated or supported by overly bias research and overlook the harm that these activities will cause. The DEA has not explained why drier and more erratic precipitation patterns predicted by major climate change studies will not help oak-hickory compete given its advantage in drier climates.	<p>The proposed action is based on and would fulfill Forest Plan direction associated with the goal of maintaining and restoring sustainable ecosystems (USDA FS 2006a).</p> <p>Wetter-loving species such as sugar maple, beech, and ash are predicted to be losers under predicted changing climate. As maturing oaks and hickories age and die, they are being replaced by trees such as maple and beech. This will lead to a beech-maple forest, the predicted losers, without oak/hickory to regenerate.</p> <p>See: Importance of Oak-Hickory Forests to Animal Species, Forest Plan EIS p. 3-81 and Alternatives and</p>

		<p>Statements that the decline of domination by oak and hickory species will result in major ecological harm are not supported by any studies showing ecological deficits that more mixed mesophytic and northern hardwood forests have compared to oak-hickory forests. The DEA's statements that there are no forest stands in the 0-9 year age class are contradicted repeatedly by inferences throughout the document about permanent wildlife openings in the project area as well as the existence of the Buffalo Pike timber harvest where 0-9 year age classes are readily apparent. Furthermore the stand ages provided in Figures 3 & 4 and given in Table 1 of the DEA suffer from the same limitations that are used in the Federal Inventory and Analysis and Continuous Forest Inventory of forest ages in Indiana which overlook early successional vegetation and habitat that increases in forests as they become older and more uneven aged. Finally, any examination of forest ages in Indiana and in the HNF will document that forests are actually young not mature to "over mature" (as the DEA asserts) when considering the entire life 250-300 year life cycle of our native old growth hardwood forests.</p>	<p>the Effects of Management on Animal Communities pages 3-92 to 3-165 (USDA FS 2006b). The Forest Plan states, "The desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat and up to an additional 3 percent as openings" (Forest Plan 3-28). Maintained wildlife openings is not the same as young forest habitat. Wildlife openings are not meant to contain trees, which is why they are not analyzed as "forested ground" during analysis.</p> <p>Regarding Buffalo Pike, we analyze at the stand level. The group selections that were created were smaller inclusions (0.75 to 2.5 acres) in much larger stands and therefore not considered young forest at the stand level.</p> <p>While many oak species can have a maximum life span of 250-300 years, they often reach maturity by year 80 or sometimes even earlier. The Dictionary of Forestry defines mature as: "pertaining to a tree or even-aged stand that is capable of sexual reproduction, has attained most of its potential height growth, or has reached merchantability standards." Nearly every hardwood stand in Houston South meets this definition of mature (other than those old clearcuts from the 70s and 80s).</p> <p>Regarding "over-mature" trees, we are referring to the black oak. Black oak is prevalent in Houston South. While its maximum life span is around 200 years, it typically begins declining at a much younger age than our other oak species. Many of black oaks are beyond 100 years old, which is why the terms "over-mature" was used.</p>
72-11	Jeff Stant 8/26/2019	<p>The activities outlined in the DEA for this project are reasonably likely to cause an increase in sediment loads to Monroe Reservoir which is the sole water supply for the City of Bloomington, the primary campus of Indiana University, Monroe County and neighboring communities. Monroe Reservoir is already</p>	<p>The impact on soil and water was analyzed in the Report for the <i>Houston South Environmental Assessment - Effects to Soil and Water</i> and summarized in the EA.</p> <p>The Pate Hollow study was used as one of many references.</p>

		<p>experiencing challenges in terms of increasing sediment and nutrient loads and algal growth. Indiana Department of Environmental Management (IDEM) has issued Recreational Advisories for Lake Monroe in each of the past three years and identified timber harvests as a contributing source of pollution contributing to blue green algae blooms. The South Fork of Salt Creek is a primary tributary significantly contributing to the water volume in Monroe Reservoir. This flow makes it logical to be reasonably concerned about any plan that involves logging on multiple steep slopes that containing highly erodible soils and drain directly into this Creek and its primary tributaries.</p> <p>We are not at all assured by the DEA's statements on pages 22 and 24 that the "Pate Hollow Study (Moss 1995)" demonstrates that the harvests proposed at Houston South will not detrimentally affect water quality in Monroe Reservoir.</p> <p>Following are some of the concerns we have about the reliance on the Pate Hollow Study by the DEA.</p> <ol style="list-style-type: none"> 1) The Pate Hollow Study assessed impacts from harvests that were much smaller in extent (8 clearcuts covering a total of 67 acres) than the harvests on 4,375 acres proposed in Houston South. 2) The locations of sampling points were not provided in the study giving the reader no ability to assess whether they were in locations that would reliably measure the impacts of logging. 3) The study has conflicting information about when the logging started but acknowledged that not enough samples were collected to establish baseline water quality and stream flow conditions for calibration prior to logging. This is a crucial deficiency. In its discussion of sediment, the study further acknowledged the 	<p>In addition to BMPs and project design measures, the Forest Plan (USDA FS 2006a) has many management requirements that address soil disturbance and water quality risks that can be identified and used at the project level to reduce them (pp. 3-13 to 3-16).</p>
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		<p>following on page 3, “To determine an increase in concentrations resulting from forest harvesting, the quality of water flowing from an undisturbed forest and its natural variability must be determined (Hornbeck and Ursic, 1979). As with other constituents monitored in this study, sufficient time for calibration was not available, which makes interpretation of the results very difficult.”</p> <p>4) Rather than comparing concentrations of nutrients, ions and suspended solids between locations upstream and downstream of clearcuts, the Pate Hollow Study compared water quality between control and harvest watersheds. This allowed events occurring in the control watershed to contaminate any comparison of runoff between sites undergoing logging and “undisturbed” forest. In the case of the paired watersheds, PH-1 and PH-2, the report acknowledged that a pasture in the headwaters of PH-1, the control watershed, was nearly 3 times the size of a pasture in PH-2 and was being utilized by “20 head of livestock”. The study also explains that the sampling location for PH-1 was actually only a short distance downstream of an active haul road and that after crossing the stream, this haulroad ran alongside the stream upstream of the sampling point which contributed to observable increases in suspended sediment above 1,000 mg/l at this sampling point. Clearly this point was not measuring runoff from undisturbed forest.</p> <p>5) Sampling was performed by monthly grab samples that were not taken during storm events. Tracking suspended sediment increases during these events should have been one of the fundamental purposes of the study. Yet, the study states, “In addition, the suspended sediment monitoring of stormflow</p>	
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		<p>did not provide a satisfactory number of samples with which a meaningful statistical analysis could be performed. These sample results in Figure 21 (depicting suspended sediment concentrations at PH-1 and PH-2) do not necessarily indicate what the maximum suspended sediment concentration was during a particular storm, only what it was at the time the sample was obtained.” (page 3) In fact stormflow at the samplers at the other paired watersheds of the study, PH-3 and PH-4, “was sufficiently high to reach the samplers only once.” (page 4) The likely deteriorated water quality from such events would have been frequently missed.</p> <p>Despite these basic limitations, the study acknowledged that total nitrogen and nitrate concentrations “appeared to be measurably affected by harvesting” in watershed PH-4. Furthermore, monitoring data revealed that suspended sediment concentrations in the stream draining watershed PH-2 had jumped to more than 10,000 mg/l one year after harvests were completed in this watershed, substantially violating the water quality standard for Total Suspended Solids. This concentration was also measure well after erosion control measures discussed in the study had been implemented. The study does not present or discuss why water quality monitoring appears to have been discontinued in 1990, shortly after elevated TSS concentrations were measured.</p> <p>The steps outlined in the DEA to implement Best Management Practices and monitor the impacts of the project on the water quality of the South Fork of Salt Creek are woefully inadequate to prevent harm from occurring to this drinking water.</p>	
72-12	Jeff Stant 8/26/2019	There are alternatives to the project that the US Forest Service (USFS) should examine that can achieve the	Please see response to comment 53-5.

		<p>state objectives of this project without endangering the municipal water supply of Monroe Reservoir. This Reservoir provides the sole source of public drinking water to more than 120,000 people and sustains the surrounding economies of communities in Monroe and Brown Counties. These alternatives could also satisfy other goals and objectives in the HNF's Land and Resource Management Plan that recognize the ecological and recreational importance of National Forest System (NFS) lands in the Pleasant Run purchase unit.</p> <p>There are 102,097 acres of National Forest System land in the HNF designated in Management Areas that can be utilized to meet the primary purpose and needs of this project stated in the DEA to restore and maintain the oak-hickory forest type. Some 88,919 acres of these are in Management Area 2.8 and 13,178 acres are in Management Area 3.3. Approximately 6,000 to 8,000 acres of NFS land in Management Area 2.8 are in watersheds that do not drain to Monroe Reservoir located west of the proposed Houston South project in the Pleasant Run Purchase Unit. Given the potential adverse impact to the highly-utilized water supply of Monroe Reservoir of this Project as proposed, we urge the USFS to examine alternatives that would do the following:</p> <ol style="list-style-type: none"> 1) Relocate the Project on Management Area 2.8 lands in watersheds in the Pleasant Run and possibly Units of the HNF at Lost River that do not drain to Monroe Reservoir. 2) 2) Protect the health of the watershed of Monroe Reservoir. Focus on actions to protect and enhance the health of Lake Monroe and its tributaries. Management actions would include: <ul style="list-style-type: none"> • Road decommissioning • Restoration of eroded or degraded sites on HNF land 	
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		<ul style="list-style-type: none"> • Acquisition of additional HNF acreage in the watershed, and restoration of degraded lands that may be acquired • Collaboration with IDNR, US Fish & Wildlife Service, US Corps of Engineers and neighboring private landowners (private and public) on land and water restoration projects including stream and wetland restoration projects <p>3) Develop the recreational potential of NFS lands within Pleasant Run Purchase Unit that drain to Monroe Reservoir and/or are adjacent to the Charles Deam Wilderness. Recognizing that Lake Monroe and the surrounding public lands (HNF, IDNR, COE) make up a concentration of public lands and water for wilderness and primitive recreation that is unmatched elsewhere in the states of Indiana, Ohio or Illinois, focus management actions on providing and enhancing sustainable outdoor recreation opportunities: trails, backcountry campsites, fishing and hunting access points, canoeing and kayaking access.</p> <ul style="list-style-type: none"> • Restore and improve existing recreation facilities and decommission sites or trails that cannot be adequately maintained because of poor design or location. Complete the connection of the Knob stone and Tecumseh Trails. • Ensure that recreation facilities are safe for users. • Limit vegetation management to that necessary to provide user safety and eliminate invasive species. <p>The examination and comparison of just the Houston South Project as proposed with a No Action alternative needlessly offers an unacceptable 'all or nothing' choice that fails to integrate other important goals and</p>	
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		objectives in the Land and Resource Management Plan of the HNF. We urge the USFS to develop a final plan for this Project that produces the values outlined in the above alternatives.	
72-13	Jeff Stant 8/26/2019	The project will adversely impact the natural forested environment of this area which is unique in the entire lower midwestern United States for the wilderness values it provides. The project will force the closure of the Knob stone Trails recently extended through the area. This is the primary backpacking trail of the state of Indiana. The project's vague plan to install an aquatic organism passage feature on Combs Creek along Tower Ridge Road, threatens to destroy a series of scenic shelf water falls enjoyed by the public that uses this road. The intensive prescribed burning that the project will undertake along as much as two miles of the border of the Charles Deam Wilderness will alter the natural forest in this area which serves an important role a buffer area for this heavily-used wilderness area.	<p>The impact on recreation was analyzed in the <i>Report for the Houston South Environmental Assessment - Effects to Visuals and Recreation</i> and summarized in the EA.</p> <p>As stated earlier, we feel that a functioning aquatic ecosystem is more important than a human's perception of "scenic."</p>
72-14	Jeff Stant 8/26/2019	<p>The project will degrade habitat for a host of forest dependent species many of which are limited in Indiana to this heavily-forested area in the southcentral portion of the state.</p> <p>The DEA asserts that that a major benefit of the project will be to provide habitat for declining early successional bird species. It fails to discuss or even acknowledge any adverse effects on birds from the extensive new edge that will be created by commercial logging and other silvicultural treatments proposed on as much as 4,375 acres in this project. These activities will open up and fragment large blocks of interior, closed canopy forest in one of the only areas of Indiana and the lower midwestern United States where such interior forest habitat is not uncommon and where Breeding Bird surveys indicate that forest songbirds are successfully raising young and sustaining their populations.</p>	<p>Habitat Fragmentation was analyzed in the Forest Plan Final EIS, p. 3-89 (USDA FS 2006b).</p> <p>Cowbird (and general predation) analysis can be found in the Forest Plan EIS pp. 3-90, 3-95, 3-98 (USDA FS 2006b).</p> <p>Birds on the Regional Foresters sensitive species were analyzed in a biological evaluation and documented in the EA.</p> <p>King and Schlossberg (2013) state, "The presence of agricultural and residential development within the landscape can negatively affect birds through nest predation and parasitism (Robinson et al., 1995); however, these threats are not typical of extensively forested (~70%) landscapes (Hunter et al., 2001).</p> <p>The project area would remain forested, with a diversity of age class.</p>

	<p>Research documents that forest song birds in forests in more fragmented environments experience increased predation and nest parasitism compared to the predation and nest parasitism those birds face in larger forests with more uninterrupted forest interior habitat. A study of nine sites in areas with varying degrees of forest cover (in southern Indiana, Illinois, Missouri and northern Wisconsin) documented this increased adverse edge effect in smaller forests. Nests of three ground nesting warblers, ovenbird, worm-eating and Kentucky warbler and two species that nest near the ground in shrubs, hooded warbler and indigo bunting, were lost to predators such as blue jays, crows, racoons and snakes, at a much higher rate in forests in more fragmented landscapes.ⁱ Twelve of the thirteen cases of the highest daily predation, with more than 80 percent of these birds' nests consumed by predators, occurred in the four most fragmented landscapes (in Illinois, Wisconsin and northern Missouri). The authors concluded:</p> <p style="padding-left: 40px;">Fragmentation at the landscape scale thus affects the levels of parasitism and predation on most migrant forest species in the midwestern United States...Parasitism levels of wood thrushes, tanagers and hooded warblers and predation rates on ovenbirds and Kentucky warblers were so high in the most fragmented forests that they are likely population sinks*...Our results suggest that a good regional conservation strategy for migrant songbirds in the Midwest is to identify, maintain and restore the large tracts that are most likely to be population sources. Further loss or fragmentation of habitats could lead to a collapse of regional populations of some forest birds. (p. 1989)</p> <p>(*Population sinks are described in the study as forests in which local reproduction of these birds is insufficient to compensate for adult mortality. (p. 1988))</p>	<p>Please see response to comment 28.</p> <p>The <i>Report for the Houston South Restoration Environmental Assessment - Effects to Aquatic Resources</i> states: "The use of SMZs or riparian buffer zones in harvest operations can help protect biological communities that rely on riparian habitat. Maigret et. al (2014) found that when ephemeral streams are protected with SMZ regulations, declines in salamander abundances can be mitigated. Results from Semlitsch et. al (2008), strengthen recommendations to manage and harvest timber in small plots to allow forest dependent, pond breeding amphibians to shift habitat to increase survival and increase the potential for subsequent recolonization after succession. Their results also show that evacuation of pond breeding salamanders is reduced by the presence of high amounts of down wood and strengthens management recommendations to retain down wood on clearcuts. Sampling done by Hoosier biologists in ponds in or near clearcuts in the Jeffries timber sale in 2016 showed over 400 adult breeding salamanders in 4 minnow traps. The clearcut took place in 2014 and 2 years later showed little negative affect on the native salamander population" (pp 7 – 8).</p>
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		<p>In addition to an increase in nest predators, one of the significant impacts is "brood parasitism" of forest bird nests by brown-headed cowbirds, a bird of open country and forest edges whose numbers have increased dramatically in the eastern US as hardwood forests were cleared. When cowbirds lay their eggs in a "host" bird's nest, their young hatch first and out-compete the chicks of the host bird usually pushing them out of the nest, killing them and leaving the host parent to raise the cowbird chick(s).</p> <p>The largest study done on the effects of cowbird parasitism on forest songbirds in Indiana monitored 1,293 nests in six different forest landscapes in Yellowwood State Forest and the Hoosier National Forests during four breeding seasons. The study examined levels of cowbird parasitism on nests from large "exterior" forest edge created by clearcutting, utility corridors and agriculture and from the "interior" forest edge of "patch" openings from smaller clearcuts, clearings for early successional wildlife habitat, and group tree openings in selective logging, stated methods for vegetation treatment in the Houston South Project DEA.</p> <p>The study showed that nests of forest song birds closer to both exterior and interior edges from timber harvests were more subject to parasitism by cowbirds, than nests of these birds in unlogged interior forest. For example, the parasitism of worm-eating warbler and ovenbird nests increased from 12% and 8% respectively of nests in unlogged interior forest to 33% of their nests near interior forest edges. Parasitism of red-eyed vireo and wood thrush nests increased from 10% and 8% in unlogged forest to 20% and 50% respectively of their nests near forest interior edges created from logging. The authors concluded,</p> <p style="padding-left: 40px;">When combined with other deleterious effects of forest fragmentation such as reduced habitat availability and increased nest predation, brood</p>	
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		<p>parasitism may seriously threaten neotropical migrant populations. . . . Management activities presently occurring in state and national forests, such as timber harvests and the creation and maintenance of forest openings, increase the area of internal edge habitat. Such habitat alteration may reduce nesting success and thus detract from this landscape's value as a source for populations of neotropical migrant birds.</p> <p>We are aware of no studies, including any research from the Hardwood Ecosystem Experiment being undertaken to examine the short and long term impacts of silviculture on the forest ecosystem in Yellowwood and Morgan-Monroe State Forests, that have refuted these findings.</p> <p>We also find almost no mention in the DEA of the ample research that has documented adverse impacts to amphibians, particularly salamanders from logging operations. Terrestrial salamanders are abundant vertebrates that can significantly influence invertebrate composition and decomposition rate in the detrital ecosystem of the forest floor. They are also prey for many other forest invertebrates including snakes, birds and mammals.</p> <p>A randomized, replicated, controlled study in 1994–2007 of harvesting in six hardwood forests in Virginia, USA (3) found that 13 years after harvests, salamander abundance at leave-tree harvested sites was about as low as at clearcuts at 4 individuals versus 2 individuals per transect respectively but significantly lower than at unharvested sites which had 7 individuals per transect. The salamanders studied included mountain dusky, southern ravine, red-backed and slimy salamanders, the latter two also being common in the HNF.</p>	
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73	Tim Maloney HEC 8/26/2019 (PR bb73)	<p>The project analysis should better quantify project outcomes in the draft EA, including identifying which outcomes will be tracked, measured and compared, and how they compare to Forest Plan goals. For example, the draft EA contains little information on net changes in resource conditions after the project completion, for:</p> <ul style="list-style-type: none"> • Percent of acres in young forest (0-9 years) for the project area (contained in Vegetation Report) and management area 2.8 forest wide • Change in overall age class diversity • Total habitat, by type, trends: increasing, stable, or decreasing, forest wide • Permanent road mileage • Trail mileage • Change in acres/sites affected by NNIS • Timber volume produced 	<p>The draft (and final) EA contain the requirements found at 36 CFR 220.7(b).</p> <p>An EA must include the following:</p> <p>(1) Need for the proposal. The EA must briefly describe the need for the project.</p> <p>(2) Proposed action and alternative(s). The EA shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.</p> <p>(3) Environmental Impacts of the Proposed Action and Alternative(s).</p> <p>(4) Agencies and Persons Consulted.</p>
73-2	Tim Maloney 8/26/2019	<p>The Henslow's sparrow (discussion beginning page 40) is a grassland species (see Status Assessment and Conservation Plan for the Henslow's Sparrow, US Fish and Wildlife Service, 2012) and not appropriate as an indicator of forest management outcomes on the HNF. Recommended breeding habitat patch size is at</p>	<p>The Henslow's sparrow is on the Hoosier's Regional Forester's sensitive species (RFSS) and is found within the cumulative effects boundary list, thus we are required to analyze Henslow's sparrow.</p>

		<p>least 30 hectares (~70 acres), which cannot be provided on the HNF without turning large swaths of forest land into grassland, which is not forest management, but rather forest conversion. We appreciate attention to effects on any non-HNF habitat for this bird, but otherwise HNF management should not address habitat needs for this bird.</p> <p>The Forest Plan and project emphasis on oak regeneration leads the draft EA to discuss other tree species and forest types as “less desirable” (page 7). Oak-hickory forests have substantial value to wildlife and biological diversity, as described in research, but they are not the only forest species that provide food and shelter for a great variety of animals. The soft mast produced by American beech is used by many species: squirrel, wild turkey, ruffed grouse, and bobwhite quail (Southern Forest Experiment Station, USFS). White-tailed deer and lepidopteran larvae feed on sugar maple seeds, buds, twigs, and leaves (Lake Forest College). Owls, woodpeckers, and wood ducks will utilize cavities in sugar and red maple. American sycamore, red maple and sugar maple are among the many tree species that provide roosting habitat for the Indiana bat (USFS, Fire Effects Information System, myotis sodalis). Characterizing oak-hickory as the only desirable forest type conflicts with the stated goal of moving the forest toward greater diversity of forest types and age classes.</p>	<p>The less desirable species refers to trees within the area of oak/hickory regeneration. Many locations in the project area have site characteristics that favor beech, maple, and other hardwoods. The regeneration of oaks or hickories would not be attempted at those sites.</p>
73-3	Tim Maloney 8/26/2019	<p>“This “likely to adversely affect” call [for Indiana bat and Northern long-eared bat] is due to potential timber operation accidents and the removal of potential roost trees without seasonal restrictions. Therefore, the effects of the Buffalo Pike Project and the Houston South project are discussed cumulatively below.” (Hoosier National Forest Biological Evaluation for Threatened and Endangered Species, page 20).</p> <p>This statement implies that the seasonal restrictions on removing potential roost trees will not be observed. If</p>	<p>There are no seasonal restrictions on removing potential roost trees. Therefore, we have an Incidental Take Statement for the Indiana bat.</p> <p>Management Indicator Species were required by a previous planning rule, and no longer are required to be evaluated at the project level.</p> <p>Thank you for your support to improve aquatic organism passage.</p>

	<p>this is the case, the project actions will not comply with the Incidental Take Statement for the Indiana bat.</p> <p>The Cerulean warbler is appropriately identified as deserving attention given its status, including its designation as a state endangered species in Indiana. There is no mention of the five management indicator species identified in the Forest Plan. “These MIS are selected on the basis of being likely candidates to provide information on the effects of management activities.” (page C-5, Forest Plan). They are: Yellow-breasted chat, American Woodcock, Louisiana waterthrush, Wood thrush, and Acadian flycatcher. The Cerulean warbler and the remaining four MIS (American woodcock is discussed in the EA) should be included in the monitoring done for this project.</p> <p>We appreciate that the HNF has conducted aquatic species monitoring in the streams in the Houston South project area. As reported in the Report for the Houston South Restoration Environmental Assessment Effects to Aquatic Resources, and in a personal conversation with the HNF aquatic biologist at the Bloomington open house, the overall water quality, and habitat quality, in most of these streams is fairly high, based on the QHEI ratings and the biologist’s expectation of the macroinvertebrate sampling results, which have not been published yet. The reason for the low IBI (fish community) rating is due to the “flashy” hydrology, and limitations to fish passage created by roads and culverts. We support the HNF’s proposal to improve aquatic organism passage in the streams in the project area.</p> <p>Further, the good water quality of these streams reinforces the importance of maintaining the water quality of Lake Monroe tributaries, given the impairments affecting the Lake presently including hazardous algae blooms.</p>	<p>The <i>Report for the Houston South Restoration Environmental Assessment - Effects to Aquatic Resources</i> states: “Non-fish bearing ponds and pools are important breeding areas for Jefferson salamander (<i>Ambystoma jeffersonianum</i>), spotted salamander (<i>Ambystoma maculatum</i>), marbled salamander (<i>Ambystoma opacum</i>) and wood frog (<i>Rana sylvatica</i>). Of the 25 ponds sampled in the project area in the spring of 2018, 20 were found to have breeding populations of either wood frog, spotted salamander or Jefferson salamander. Many contained all 3 species. The ponds throughout the project area appear to be very productive and are an important habitat resource for native herptofauna.”</p> <p>The report also states, “Sampling to monitor aquatic species and habitat will continue through and after the implementation of proposed actions to discern how aquatic species and habitats were affected by proposed actions.”</p> <p>Federally Endangered, Threatened, or Proposed Species and Regional Foresters sensitive species (RFSS) are required to be evaluated at the project level. Pine warbler and wild turkey are not Federally listed species and not on the Hoosier’s RFSS list.</p>
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73-4	Tim Maloney 8/26/2019	<p>The HNF's response to our comment about surveying for Special Areas and Research Natural Areas stated, "There are no Special Areas (MA 8.2) or Research Natural Areas (MA 8.1) in the project area." (page 102, Response to Scoping Comments). This was not responsive to our recommendation. The project area should be surveyed for potential RNAs or special areas to identify any candidate areas for consideration. If this has been already been done, please include the results in the final environmental assessment.</p>	<p>Comment noted.</p> <p>Special Areas (MA 8.2) are Research Natural Areas (MA 8.1) are designated by the Forest Plan. Surveying for potential RNAs or special areas would require re-designation of the current Management Area, which would require a Forest Plan amendment or could occur during Forest Plan revision. Surveying for potential RNAs or Special Areas is beyond the scope of project-level analysis.</p>
73-5	Tim Maloney 8/26/2019	<p>Oak-hickory is the dominant forest type in the project area as well as the entire HNF. (draft EA, Biennial Monitoring and Evaluation Report for FY2016 and FY2017). According to the Monitoring Report, this dominance is not only in the older age classes (80 years and above) but also in the 10-39 age class, 40-59 age class, and 60-79 age class. If one of the project</p>	<p>Many locations in the project area have site characteristics that favor beech, maple, and other hardwoods. The regeneration of oaks or hickories would not be attempted at those sites.</p> <p>Most of the proposed silvicultural treatments would maintain a continuous canopy: pine and hardwood</p>

	<p>goals is to increase forest type diversity, then the gradual conversion of some sites to more mesic forest would serve to accomplish this goal.</p> <p>The draft EA does not describe how other elements of the desired condition for management area 2.8 will be achieved. For example, “Large trees with a continuous canopy characterize much of this area.” (Forest Plan, page 3-28). How will the project actions contribute to this desired condition?</p> <p>More information on the experience with and prospects for successfully regenerating oak through prescribed fire and even-aged management should be provided, given this statement:</p> <p>“Studies on the HNF have shown mixed results on the establishment of oak and hickory species following hardwood clearcuts (Jenkins and Parker 1997, Seifert et al. 2005, Morrissey et al. 2008, Swaim et al. 2018). None of these studies looked at stands that were burned following harvest. It is likely that clearcut harvests on dry to dry-mesic sites, in conjunction with prescribed fire, will develop a strong oak-hickory component in subsequent stands.” (Page 14, Report for the Houston South Restoration Project, Environmental Assessment, Effects to Vegetation)</p> <p>Proposed widespread, landscape-level use of prescribed fire across the project area, including non-HNF land where owners consent, goes well beyond other prescribed burning projects in this area and requires detailed justification. The prescribed fire prescription is described as mainly silvicultural. Yet, the HNF’s latest Biennial Monitoring & Evaluation Report for FY2016 and FY2017 indicates that “Data on silvicultural burns are just now being collected as those projects are now coming to fruition.” So there seems to be little data to support burning on this scale.</p>	<p>thinning are a combined 2,405 acres. Thinning is considered an intermediate treatment aimed at reducing stand densities to improve growth, enhance forest health, and recover potential mortality (Helms 1998).</p> <p>For Management Area 2.8, the Forest Plan states, “The desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat and up to an additional 3 percent as openings. The Forest manages the area primarily for plant and animal habitat diversity and timber harvest is an appropriate tool for use in this area.</p> <p>The geographic extent of prescribed burning on the Hoosier has indeed increased as new congressional authorities have been utilized. To lessen the risk of prescribed fire operations, maximize efficiencies, and provide for fuels reduction benefits on adjacent private land Wyden Authority can be applied whereas in the past it was not available. In order to provide for a safe working environment for practitioners and reduce the risk of escape, prescribed burn units must be designed considering topography, natural and man-made features, and possible receptors of smoke. These features occur regardless of ownership and the use of Wyden Authority empowers practitioners to minimize the risk of escape or injury, reduce the amount control needing to be constructed, and extend the benefits of treatment to adjoining landowners should they be agreeable.</p> <p>In the last Biennial Monitoring and Evaluation Report for FY2016-2017 quantitative data regarding silvicultural burning was being collected but not yet available for analysis. Qualitative monitoring efforts in the form of walk-through surveys prior to and during the aforementioned monitoring period has indicated that prescribed burning is successful in achieving silvicultural objectives. Furthermore, support for prescribed burning as silvicultural and ecosystem restoration tool at the landscape level in the Central Hardwoods is contained in</p>
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			<p>the literature and summarized in a synthesis document (Brose et al., 2014). Research and monitoring that is ongoing since that period continue to support the mesophication theory and oak-fire hypothesis.</p> <p>The data that is “coming to fruition” is from the Oriole research project which is focused on the effects of different combinations of timber harvest, TSI, and prescribed burning on oak regeneration. We just conducted the first burn in the research area in spring 2019. The first official post-burn data collection will be conducted by Purdue University in spring/summer 2020, although the Forest Silviculturist has 32 regeneration plots within the burn area to monitor the oak regeneration. These were randomly placed plots that were stratified by harvest or no harvest. Below is a summary of competitive oak/hickory regeneration (aka advanced regeneration) following the burn:</p> <table><tr><th colspan="2">Rx Burn inside harvest areas</th></tr><tr><th>Species</th><th>Trees per acre</th></tr><tr><td>White Oak</td><td>1,688</td></tr><tr><td>Chestnut Oak</td><td>188</td></tr><tr><td>Scarlet/Black Oak</td><td>656</td></tr><tr><td>Hickory</td><td>234</td></tr><tr><td>Total:</td><td>2,766</td></tr></table> <table><tr><th colspan="2">Rx Burn outside harvest areas</th></tr><tr><th>Species</th><th>Trees per acre</th></tr><tr><td>White Oak</td><td>515</td></tr></table>	Rx Burn inside harvest areas		Species	Trees per acre	White Oak	1,688	Chestnut Oak	188	Scarlet/Black Oak	656	Hickory	234	Total:	2,766	Rx Burn outside harvest areas		Species	Trees per acre	White Oak	515
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73-6	Tim Maloney 8/26/2019	<p>The draft EA concedes that the project actions will contribute to the spread of invasive plant species. “Invasive plants will continue to invade and spread across the landscape. The cumulative impact of implementing the action alternative combined with ongoing human and natural disturbances is the continuing spread of these species.” And, “This spread really has no limit other than the susceptibility of the receiving habitats.” (page 19, draft EA).</p> <p>“Overall, these disturbances and their buffers signify the amount of acreage that have the most potential for NNIS spread (indicator of response) within the proposed Houston South project area: 3,248 acres.” (Page 50).</p> <p>The above statements and conclusions about the project provide a clear and compelling instance of an unresolved conflict. The conflict is between the increased management of the forest resource, as proposed by the project, and the predicted outcome that the project will produce by increasing the spread of invasive plants and causing harm to the forest. Every activity proposed for the project contributes to the spread of NNIS: logging, road building, prescribed</p>	<p>The statement in the Biological Evaluation for Threatened and Endangered Species, “Herbicide use is proposed in the Houston South Project and would take the form of nonnative invasive species treatments, hack and squirt methods or foliar treatments” was an error and has since been corrected.</p> <p>Herbicide proposed for the Houston South project is only for silviculture treatments. The NNIS treatment would be implemented in accordance with the Forest’s Nonnative Invasive Plant Control Program Analysis.</p> <p>Our anticipation of a low to moderate risk for new introductions and possible spread of NNIS plants associated with the project activities is not contradictory because with increased management activities in the Houston South area, there would also be an increased amount of NNIS work occurring, in part funded by timber sales receipts.</p>												

		<p>fire. The result is not disputed: the project will increase the susceptibility of the receiving habitats.</p> <p>Japanese stiltgrass, one of the plant species deemed a high treatment priority, has already been found along 85% of the roads and trails included in project actions – the same roads and trails that will experience increased disturbance that facilitates the spread of this plant. (page 46).</p> <p>The Hoosier National Forest Biological Evaluation for Threatened and Endangered Species indicates that herbicides would be used for NNIS control, under the guidance of the Nonnative Invasive Species Plant Control Program Analysis. “Herbicide use is proposed in the Houston South Project and would take the form of nonnative invasive species treatments, hack and squirt methods or foliar treatments.” Under the no action alternative, NNIS management activities would continue, without the proposed action’s contribution to the spread of these species.</p> <p>There is no more compelling need for a broader consideration of project alternatives than that provided by the threat of non-native invasive species. “By properly implementing project level design criteria and mitigation measures (Table 5), the Hoosier anticipates a low to moderate risk for new introductions and possible spread of NNIS plants associated with the project activities.” (page 15). This assumption is contradicted by the facts, predictions, and conclusions of the specialist report on NNIS and the draft EA.</p>	
73-7	Tim Maloney 8/26/2019	<p>The report, The Project Scale Carbon Effects – Houston South Project Environmental Assessment (page 1) states, “If the Forest continues on this aging trajectory, more stands will reach a slower growth stage in coming years and decades, potentially causing the rate carbon accumulation to decline and the Forest may eventually transition to a steady state or to a carbon source.” And, “Furthermore, any initial</p>	<p>The referenced Nature study presented a global analysis of 403 tropical and temperate tree species. Our Houston South Report modeled data on the Hoosier and in the Houston South project area. Our model showed the Hoosier becoming carbon neutral and perhaps even a carbon source if no management occurs.</p>

	<p>carbon emissions from this proposed action will be balanced and possibly eliminated as the stand recovers and regenerates, because the remaining trees and newly established trees typically have higher rates of growth and carbon storage (Hurteau and North 2009, Dwyer et al. 2010, McKinley et al. 2011).” (Page 3, report, pages 18 and 55, draft EA)</p> <p>There is a growing body of science, not referenced in the draft EA or report, that finds that mature trees continue to accumulate carbon as they grow. “Thus, large, old trees do not act simply as senescent carbon reservoirs but actively fix large amounts of carbon compared to smaller trees.” (Rate of tree carbon accumulation increases continuously with tree size, Stephenson, N.L., et al., Nature 2014)</p> <p>And, “For decades forest scientists have thought that old-growth temperate forests were either carbon neutral or even carbon sources, emitting more greenhouse gases to the atmosphere through respiration and decomposition than they were absorbing through photosynthesis. However, recent research has questioned that assumption, showing that eastern old-growth forests may remain productive and have net positive carbon uptake later into succession and stand development than previously thought. These findings remain contentious and yet have profound implications for our understanding of the role of high-biomass, late successional forests in global carbon budgets. Emerging science strongly supports conservation of old-growth forests and management for old-growth structure as effective strategies in global efforts to reduce carbon dioxide emissions and moderate the intensity of future climate change (Luyssaert et al. 2008; Keith et al. 2009; Burrascano et al. 2013).” (From the abstract for Source or Sink? Carbon Dynamics in Eastern Old-Growth Forests and Their Role in Climate Change Mitigation,</p>	<p>The proposed action is consistent with internationally recognized climate change adaptation and mitigation practices.</p> <p>The wood and fiber removed from the forest in the proposed action transferred to the wood products sector is discussed on pages 3 and 4 of <i>Project Scale Carbon Effects –Houston South Project Environmental Assessment</i>.</p> <p>Without management, beech and maple would continue to convert stands away from oak and hickory. Thus, leaving few white oaks to benefit from a changing climate.</p> <p>This topic was analyzed as Issue 11: Concern that vegetation manipulation or timber harvest, coupled with climate change could negatively impact the local environment. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
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73-8	Tim Maloney 8/26/2019	<p>The Forest Plan's Goals and Objectives include "Maintain and Restore Watershed Health". The Houston South project should be analyzed in the context of this goal: what are the activities occurring in and nearby the HNF, how are they affecting the health of the Lake Monroe watershed, either positively or negatively, and how will the Houston South project contribute to achieving this goal?</p> <p>Given this statement in one of the reports cited in the draft EA, "Current and past studies of the effect of logging on the water quality of Monroe Lake are lacking. From the little research that is available, it was determined environmental quality goals were not being violated by timber harvesting." Effects of Forest Management on Water Quality: Focus on Monroe Lake Watershed, Indiana, Indiana DNR, Division of Forestry, page 10), more information and analysis should be conducted on the potential impacts to stream quality in the project area.</p>	<p>The EA found that there should be no negative effect to the Lake Monroe watershed. The implementation of the three AOPs would help improve approximately 14 miles of upstream habitat within the South Fork Salt Creek watershed. Rehabilitating roads and trails to specification within the South Fork Salt Creek watershed would minimize erosion instead of exacerbating at the current rate. Watershed restoration techniques in headwater streams for erosion control would occur to repair head cut and gullying that is occurring in the project area.</p> <p>Potential impacts to stream quality was analyzed in the EA under Issue 2: Concern that trails used for hauling timber could cause erosion; Issue 3: Concern that timber harvest could cause soil erosion during and after harvest; and Issue 4: Concern that timber harvest and road construction could cause sedimentation and nutrient loading in the watersheds of Lake Monroe</p>
73-9	Tim Maloney 8/26/2019	<p>The project would result in substantial new road construction and impacts to popular recreation trails. There will be 11.47 miles of new construction and a net gain of 8.77 miles in new permanent roads (Table 2). Table 1 and Table 2 from the Report for the Houston South Project Environmental Assessment Effects to Transportation should be included in the EA, as part of quantifying net changes in resources and resource impacts.</p> <p>This road construction will directly affect HNF trails, with miles of road reconstruction occurring on existing trails including the Fork Ridge trail and Hickory Ridge trails. The impact to trail quality and trail user experience, even where trails displaced by roads are reconstructed, will be considerable. Road construction may also increase sedimentation entering Lake Monroe's tributaries. The addition of almost nine miles</p>	<p>CEQ regulation state that an Environmental Assessment shall: "Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact" (40 CFR 1508.9 (a)(1)). The Responsible Official will make her decision based on the EA and the entire Project Record.</p> <p>The effects of road construction on existing trails was analyzed in the EA under the following issues: Issue 2: Concern that trails used for hauling timber could cause erosion; Issue 4: Concern that timber harvest and road construction could cause sedimentation and nutrient loading in the watersheds of Lake Monroe; Issue 5: Concern that closing trails during periods of timber management could have negative impacts to recreationists; and Issue 7: Concern that proposed harvest treatments and prescribed fire treatments could degrade the visual quality along trail corridors.</p>

	<p>of new roads is likely to more than offset any benefit from repairing existing poorly maintained roads.</p> <p>“It has also been found that disturbed areas will heal themselves within two to three years.” (page 21, draft EA, page 8, Report for the Houston South Project Environmental Assessment Effects to Transportation). Yet later at page 21, the draft EA states “Compaction, loss of water infiltration, and loss of overall long-term soil productivity are to be expected with road construction.” New or reconstructed roads with significant soil compaction do not recover naturally within two to three years. The evidence of this impact are the linear road scars found throughout the forest and mentioned in the report.</p> <p>The justification for the project outcome of 8.77 miles of new permanent road is questionable. Using administrative ATV/UTV's, or horses/mules, to access via trails sites such as wildlife openings, ponds, or dispersed campsites for maintenance is environmentally preferable to creating permanent Forest system roads.</p> <p>The project area is already well-roaded, with 72 miles of county and state roads in the project area (Table 1, Report). This mileage should be identified and considered in the cumulative impact analysis. What's more, it indicates that the actual impact in terms of permanent road mileage open to the public is to be determined later. This bears on the future impact of illegal ATV use on HNF land.</p> <p>The lack of alternatives to the proposed action results in no consideration of project options with less road construction, less impacts to existing trails, and fewer, or no, miles of new permanent roads. What's more, the road analysis does not describe or quantify in any detail the presence of problems with sedimentation or</p>	<p>The statement “It has also been found that disturbed areas will heal themselves within two to three years” is not referring to the actual road once constructed, rather the effects from road work.</p> <p>The project does not propose 8.77 miles. That is mileage difference between total miles proposed and existing FS road miles. Proposed new road construction is approximately 3.2 miles and approximately 8.3 miles of temporary road construction.</p> <p>Cumulative effects were analyzed in the Report for the Houston South Project Environmental Assessment - Effects to Transportation (pp. 11-14). Effects to the transportation system was not included in the EA because it was not an issue derived from public scoping; however, it is part of the Project Record.</p> <p>Increased future illegal ATV use on HNF land is speculative and can not be evaluated as a cumulative effect.</p> <p>Alternatives must meet the purpose and need ((36 CFR 220.7 (b)(2)). Road construction or reconstruction is designed to provide access into areas at the minimum level needed to fulfill Forest Plan direction associated with the goal of maintaining and restoring sustainable ecosystems.</p> <p>The Report for the <i>Houston South Restoration Environmental Assessment - Effects to Soil and Water</i>, on page 27 contains Attachment 1- Basic field notes from GPS tablet documenting existing erosion. This data is also in the Project Record and contains more information, documenting sedimentation and other problems of existing roads. Rehabilitating these roads to specification would minimize erosion instead of exacerbating at the current rate.</p>
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		other impacts from existing roads, besides mentioning that they exist.	
73--10	Tim Maloney 8/26/2019	Design features for roads, trails, skid trails, and stream crossings should more fully reflect the guidance provided in the Forest Plan. See Forest-wide guidance for Riparian Corridors, pages 3-14 to 3-16, and Appendix G of the Forest Plan.	All standards and guidelines prescribed in the Forest Plan for any aspect of the proposed project would be followed.
73-11	Tim Maloney 8/26/2019	Trail impacts affecting recreational users will be significant. For example, the draft EA (page 27) states that 9.5 miles of the Hickory Ridge trail system would be affected, including closure while harvesting is underway. Over 5 miles of the Hickory Ridge trails will directly affected by road construction or reconstruction, with potentially all this mileage becoming permanent roads (pages 10-11, report). Two miles of the Fork Ridge trail will also be affected by harvesting. This impact will extend over 12 to 15 years. A choice between trail closure and repurposing trails to accommodate forest management activities, or continued use of the trails for recreation, represents an unresolved conflict about alternative uses of available resources. In this case the available resources are the trails in the project area, and the alternative uses are either their conversion to a management resource or remaining a recreational resource. If recreational use is prohibited while used as a management resource, then the resource cannot accommodate both uses, thus a conflict results.	Differing opinions do not indicate unresolved conflicts. Impacts to recreation are analyzed in the EA as Issue 5: Concern that closing trails during periods of timber management could have negative impacts to recreationists. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.
73-12	Tim Maloney 8/26/2019	Given that the streams in the project area flow to Lake Monroe, via the South Fork Salt Creek, and that the project area is part of a larger complex of public land including managed lands owned by other public agencies, the cumulative effects geographic area for all impacts should be considered to be the Lake Monroe watershed. Impacts to soils and water, and to maintaining sustainable ecosystems, would potentially extend to the lake and surrounding lands. The South Fork Salt Creek watershed is 30% of the drainage inflow to Lake Monroe (Report for the Houston South	<p>The spatial boundary used to evaluate indirect and cumulative impacts is the 10-digit hydrologic unit (HUC 10) South Fork Salt Creek watershed. This boundary permits the assessment of effects from any past, present, and reasonably foreseeable future projects that overlap in time and space with effects to soil and water from the proposed action. Cumulative effects beyond the project site watershed boundary diminish below measurable levels and cannot be evaluated.</p> <p>The spatial boundary used to evaluate direct, indirect, and cumulative impacts to vegetation was the project</p>

	<p>Restoration Environmental Assessment Effects to Soil and Water, page 4)</p> <p>“Though logging may occur on private lands the effects of those treatments do not overlap in space with those on NFS lands. Furthermore, management on non-Federal lands isn’t expected to adjust age classes due to the types of harvest anticipated (diameter limit and selection).” (Page 18, Effects to Vegetation report). As noted, while sections of the cumulative effects narrative in the draft EA and specialist reports contained some discussion of activities on nearby private lands, there was no discussion we found about management activities on Indiana Department of Natural Resources lands (Morgan-Monroe and Yellowwood State Forests, or U.S. Army Corps of Engineers lands managed by the Indiana DNR. Some of these lands are managed for early successional habitat, and these non-HNF public lands should be considered in the cumulative effects analysis. These lands are partly within the South Fork Salt Creek watershed, which is the cumulative effects area for soil and water resources, and partly within the 5 mile buffer for RFSS and threatened and endangered species, and fully within the Lake Monroe watershed which should be the cumulative effects zone for all resources affected by the Houston South project.</p> <p>In its response to scoping comments, the HNF noted that “...IDNR has a timber management Memorandum of Understanding (MOU) with the USACE for timber harvesting to provide early successional woodland habitat diversity.” (page 24, Response to Scoping Comments)</p> <p>“The cumulative effects geographical boundary was formulated by the potential effects ranking to the six listed species. It was also based on the significance of the project’s impact on natural resources and then given a distance proportional to this impact. Since this</p>	<p>boundary. This boundary is appropriate to evaluate cumulative impacts to vegetation because potential cumulative effects for vegetation would be limited to changes to age class distribution. Houston South vegetation analysis was focused on the Forest Plan’s desired condition and moving acres toward the desired conditions and the effects of the project to that goal. Management by other agencies outside the Hoosier National Forest boundary is beyond the scope of this analysis because the Hoosier’s Forest Plan guides the management of the Hoosier National Forest and not State or U.S. Army Corps of Engineers (ACE) lands. Vegetation management in the way of timber harvesting has not occurred in the recent past, not occurring currently and not in the reasonably foreseeable future on non-HNF public lands within the project boundary. The leased agriculture activities within ACE lands were accounted for in the estimated 2,600 acres of agricultural land on private ground. Technically, the report should have said non-FS instead of private, but that does not change the amount of agriculture analyzed in the project area.</p> <p>Morgan-Monroe State Forest is beyond the cumulative effect boundary for soil and water resources and RFSS/threatened and endangered species.</p> <p>Yellowwood State Forest is beyond the cumulative effect boundary for soil and water resources and in a different HUC 10 watershed.</p> <p>In order to have cumulative effects, the effects must overlap in space and time. Past activities in Yellowwood State Forest would not have a cumulative effect on T&E or RFSS species from activities planned for Houston South. We are unaware of any future activity on Yellowwood State Forest that is within the 5-mile cumulative effects boundary for RFSS and threatened and endangered species.</p>
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		<p>project is wide-ranging, would be completed in a longer time span of over 10 years and may affect bat species that can forage over longer distances, a 5-mile buffer was established for the cumulative effects geographical boundary. This is also consistent with the cumulative effects geographical boundary for the Regional Foresters Sensitive Species BE (Harriss 2019).” (Hoosier National Forest Biological Evaluation for Threatened and Endangered Species, page 19)</p> <p>For some of the cumulative effects areas, the rationale for selecting that area is not well justified. For example, the NNIS cumulative effect area is only 1,000 feet beyond the disturbed areas. This limited area would not reflect more distant impacts from the spread of invasive plants, including seed dispersal by birds, small mammals, and flowing water in the Lake Monroe/Salt Creek tributaries.</p> <p>For climate change cumulative effects, the short and long term effects of timber harvesting and burning should be evaluated in the context of harvesting, forest clearing and forest conversion occurring elsewhere in the Brown County/Monroe County/Jackson County area.</p>	<p>Regarding Response to Scoping Comments, the response was to answer the specific question: “What does the Army Corps of Engineers have to say about this plan? The master plan for the Lake Monroe Reservoir offers insight on the negative impact of logging, the use of chemicals (fertilizers and herbicides) in the watershed, and the importance of controlling erosion” to describe what insight the master plan for the Lake Monroe Reservoir offered. We are not aware of any timber harvesting on ACE lands.</p> <p>The rational for determining the cumulative effect boundary for NNIS is thoroughly explained in the first two paragraphs of page 10, <i>Report for the Houston South Restoration and Vegetation Management Environmental Assessment - Effects to Plant Nonnative Invasive Species (NNIS)</i>.</p> <p>Since stiltgrass was seen along roads and trails that cross the waterways, the species is already present and spreading along waterways throughout the project area. Regarding seed dispersal by birds and small mammals, it would take woody species multiple years to be able to grow from seed to mature, seed producing plant. Ideally, most of these would be caught by NNIS treatments and/or re-shaded after tree regrowth, shaded NNIS shrubs (that produce berries) don’t reproduce as well in shade and would have reduced seed production.</p> <p>The climate change analysis considered the global forestry sector.</p>
73-13	Tim Maloney 8/26/2019	<p>In our scoping comments we identified several reasonable alternatives that are consistent with Forest Plan direction and that could accomplish part or all of the identified purpose and need for this project. Given the wide range of issues and concerns raised by HEC and many other commenters, we strongly disagree with the HNF’s conclusion that there are “no unresolved conflicts” in this project, and thus no need to analyze additional alternatives. NEPA case law, in</p>	<p>Forest Service NEPA regulations (36 C.F.R. 220.7 (b)(2)) state: “The Environmental Assessment (EA) shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.”</p> <p>The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age.</p>

	<p>Aertsen v. Landrieu, 637 F.2d 12, 19-21 (1st Cir. 1980) for example, indicates that .."§ 102(2)(E) formerly § 102(2)(D) of NEPA, 83 Stat. 853, as amended by 89 Stat. 424, 42 U.S.C. § 4332(2)(E), which provides that "to the fullest extent possible ... all agencies of the Federal government shall ..." (E) study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources; The foregoing obligation to describe alternatives is not limited to a proposed major action significantly affecting the human environment, for otherwise it would add nothing to § 102(2)(C)(iii) of NEPA which already imposed an obligation upon a Federal Government agency to make with respect to a proposed major action a statement of "alternatives to the proposed action."</p> <p>Notwithstanding the Trump Administration's Executive Order 13855 directing the Forest Service to "streamline agency administrative and regulatory processes and policies.. adhering to minimum statutory and regulatory time periods...", the Agency must still comply with NEPA and conduct an appropriate analysis of this project that has a high degree of public interest as represented by the number and substance of the formal comments and the concerns expressed by local elected officials.</p> <p>NEPA requires the Forest Service to analyze meaningful alternatives to its proposed action when unresolved conflicts occur, which we have described earlier in these comments. Besides the proposed action consisting of a variety of vegetation management activities, following are additional alternatives which would achieve part or all of the project's purpose and need as well as Forest Plan goals for management area 2.8. Also, there is no reason why the project's purpose and need cannot be modified to reflect the information and</p>	<p>Public comments did not drive an additional alternative that met the need for action. See 36 CFR 220.7(b)(2)(i) Proposed Action and Alternatives.</p> <p>36 C.F.R. 220.7 (b)(2)(i)) states, "When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, section 102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives."</p> <p>Differing opinions do not indicate unresolved conflicts. Issues, derived from public comments, were analyzed in the EA. This project is consistent with and implements the Forest Plan. Conflicts were resolved by applying Forest Plan direction. Concerns of those who oppose the project are addressed in the EA through consideration of the no action alternative.</p>
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		<p>recommendations provided by commenters. These alternatives should be evaluated and compared to the proposed action:</p> <p>a) Lake Monroe Watershed Health Protection and Enhancement</p> <p>This alternative would focus on actions to protect and enhance the health of Lake Monroe and its tributaries. Management actions may include:</p> <ul style="list-style-type: none"> • Road decommissioning • Restoration of eroded or degraded sites on HNF land • Acquisition of additional HNF acreage in the watershed, and restoration of degraded lands that may be acquired • Collaboration with neighboring landowners (private and public) on land and water restoration projects including stream and wetland restoration projects • Collaboration with IDNR, US FWS and US COE to restore and improve aquatic habitats in the Lake and its tributaries <p>b) HNF Forest Recreation Alternative</p> <p>Recognizing that Lake Monroe and the surrounding public lands (HNF, IDNR, COE) represent a major concentration of outdoor recreation lands and water, focus management actions on providing and enhancing sustainable outdoor recreation opportunities: trails, backcountry campsites, fishing and hunting access points, canoeing and kayaking access.</p> <ul style="list-style-type: none"> • Restore and improve existing recreation facilities and decommission sites or trails that cannot be adequately maintained because of poor design or location. • Ensure that recreation facilities are safe for users. 	
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		<ul style="list-style-type: none"> • Limit vegetation management to that necessary to provide user safety and eliminate invasive species. <p>c) Vegetation management in Management Area 2.8 and 3.3 outside the Lake Monroe Watershed</p> <p>This alternative would focus on actions to maintain and restore watershed health by identifying and evaluating areas of MA 2.8 and 3.3 outside of the Lake Monroe watershed where vegetation management may be used to provide a mix of age classes and forest structure.</p> <p>d) One or more alternatives that contain different levels and mixes of the management practices provided for in the proposed Houston South project.</p>	
73-14	Tim Maloney 8/26/2019	Under “Public Involvement and Tribal Consultation”, page 10, the draft EA states that the project was first introduced to tribal partners in October 2015. If this date is accurate, why was no notification provided to the public until almost 3 years later?	<p>Tribal consultation is much different than public involvement. The Federal government has trust responsibilities to Tribes under a government-to-government relationship to ensure that the Tribes’ reserved rights are protected. Consultation with tribes helps ensure that these trust responsibilities are met.</p> <p>We contacted the tribes in October 2015 when we identified an area for possible management. There was no proposed action, just an area identified. Once the proposed action was developed, tribes we sent a more detailed letter on November 16, 2018. The public scoping letter was sent a week later.</p>
73-15	Tim Maloney 8/26/2019	Management Area guidance does not mandate that allowable management activities, such as vegetation management, actually take place. “The revised plan for the Hoosier National Forest is permissive in that it allows but does not mandate projects and activities.” (Record of Decision, Final Environmental Impact Statement for the Land and Resource Management	The Houston South project area was chosen because the area is overly dense, lacking young forest, and is losing the oak-hickory component as stands age.

		<p>Plan, Hoosier National Forest, January 11, 2006, page 2).</p> <p>Thus, the HNF has wide latitude in determining what mix of management actions, or natural processes, will move a particular management area toward the desired condition, as well as achieve the other goals and objectives of the Forest Plan.</p>	
73-16	Tim Maloney 8/26/2019	<p>In our scoping comments, we recommended that the assessment of this project evaluate what environmental, economic and social changes may have occurred in the project area and neighboring region in the thirteen years since the current HNF plan was adopted. Given that the Forest Plan allows for flexibility in management decisions, and that conditions on the ground in the HNF, and in neighboring communities will have changed, it is important that proposed projects consider in detail what conditions have changed over this period and how these changing environmental, economic, and social conditions would or should affect management decisions. In the case of the Houston South project, changes in land use, population growth, and other natural resource development in the Lake Monroe watershed should be considered. We do not believe that the draft EA adequately assesses these changes over time.</p>	<p>We tiered to the 2006 Forest Plan FEIS when appropriate, but also used the most current scientific data available in the specialists reports and biological evaluations and summarized the results in the EA.</p>
73-17	Tim Maloney 8/26/2019	<p>Outdoor recreation in the national forests is a powerful economic force. Our national forests including the HNF are enjoyed by individuals and families who come to the forests to hike, camp, hunt, fish, watch wildlife, ride horses, bike, and canoe and kayak their waters. According to the Forest Service, "recreation, hunting, fishing, and wildlife viewing activities together account for more jobs than any other activity on the National Forest system." And, "Outdoor recreation on the National Forest System supports about 205,000 jobs, contributing about \$13.6 billion to the Nation's gross domestic product each year." (FY 2014 Budget Justification, USDA Forest Service, page 5).</p>	<p>The ID team incorporated management requirements and design measures in the project design to reduce any potential negative impacts to soil and water resources (EA, Appendix A). Forest Plan standards and guidelines (USDA 2006a) and statewide best management practices (BMPs) are required of implementers of the project. The Forest Service follows BMP monitoring guidelines to protect water quality using the National Best Management Practices for Water Quality Management on National Forest System Lands Technical Guide (USDA FS 2012).</p>

		<p>Across Indiana, outdoor recreation generates \$15.7 billion in annual consumer spending and 143,000 direct jobs, according to the Outdoor Industry Association (The Outdoor Recreation Economy Report, Outdoor Industry Association, April 2017, https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/)</p> <p>Lake Monroe and its surrounding lands are a very popular destination for boaters, hikers, campers and anglers. According to the Indiana DNR, nearly 1 million people visited the DNR-managed recreation areas at the lake in 2017. (IDNR 2016/2017 Estimated Fiscal Year Visits for Indiana State Parks [includes State Recreation Areas]). Visitor spending within 30 miles of Lake Monroe topped \$27 million in 2016 (U.S. Army Corps of Engineers, Monroe Lake, Recreation 2016 - Value to the Nation Fast Facts, http://www.corpsresults.us/recreation/fastfacts/lake.cfml?LakeID=293).</p> <p>The value of Lake Monroe goes well beyond recreation and tourism benefits. The Lake is a primary drinking water source for 145,000 area residents, supporting the growing population of Monroe County (City of Bloomington Utilities Department, August 24, 2017). Both the recreation value and drinking water value of the Lake depend on clean, safe water. But this outcome is not always a certainty given the threats to the Lake's quality from land uses in the watershed.</p> <p>Given the above, any forest management activities occurring on the HNF lands within the Lake Monroe watershed should not only prevent any adverse impacts to water quality, but also serve to improve and enhance the health of the Lake Monroe watershed.</p>	<p>The implementation of the three AOPs would help improve approximately 14 miles of upstream habitat within the South Fork Salt Creek watershed. Rehabilitating roads and trails to specification within the South Fork Salt Creek watershed would minimize erosion instead of exacerbating at the current rate. Watershed restoration techniques in headwater streams for erosion control would occur to repair head cut and gullying that is occurring in the project area.</p>
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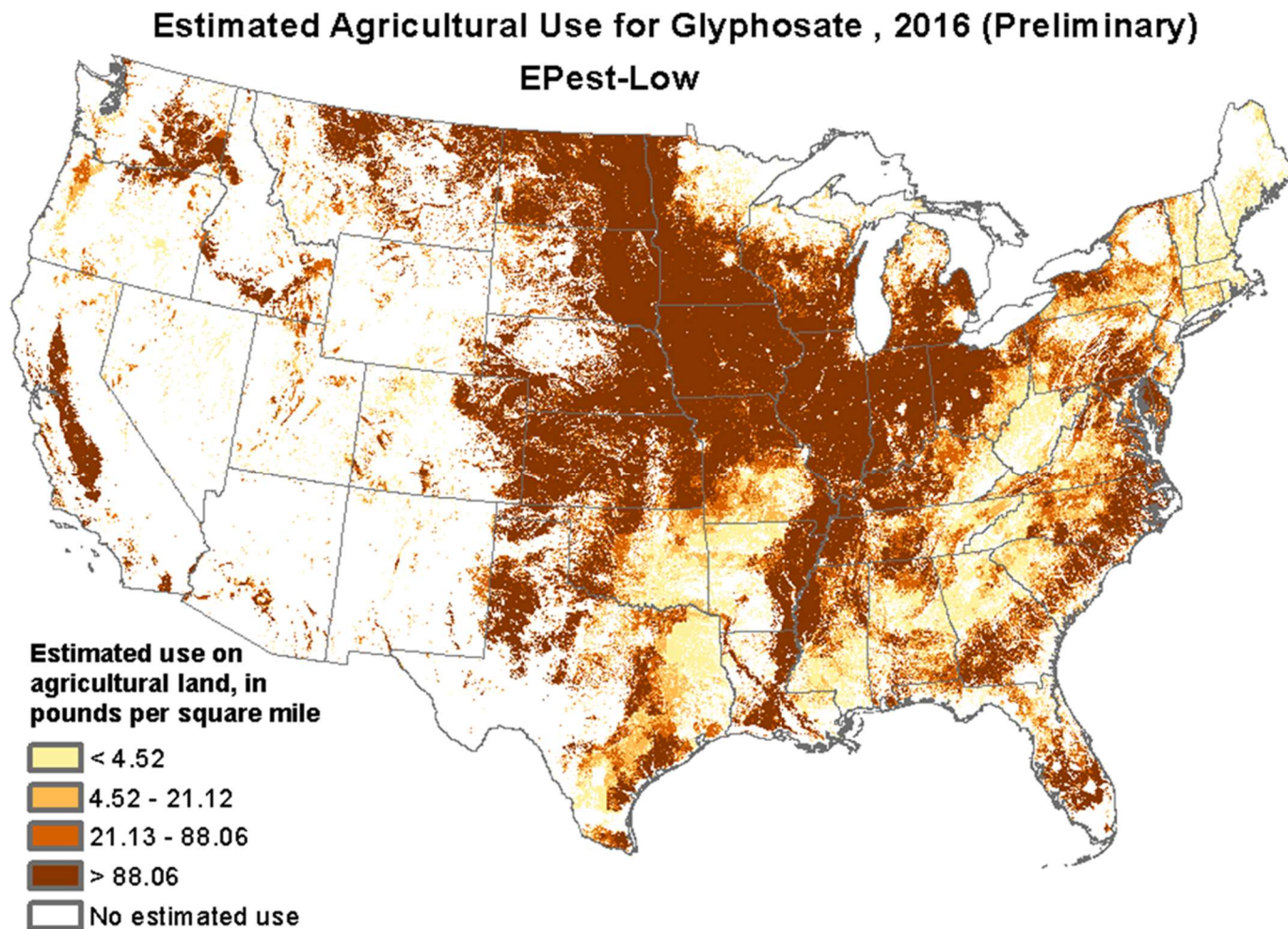
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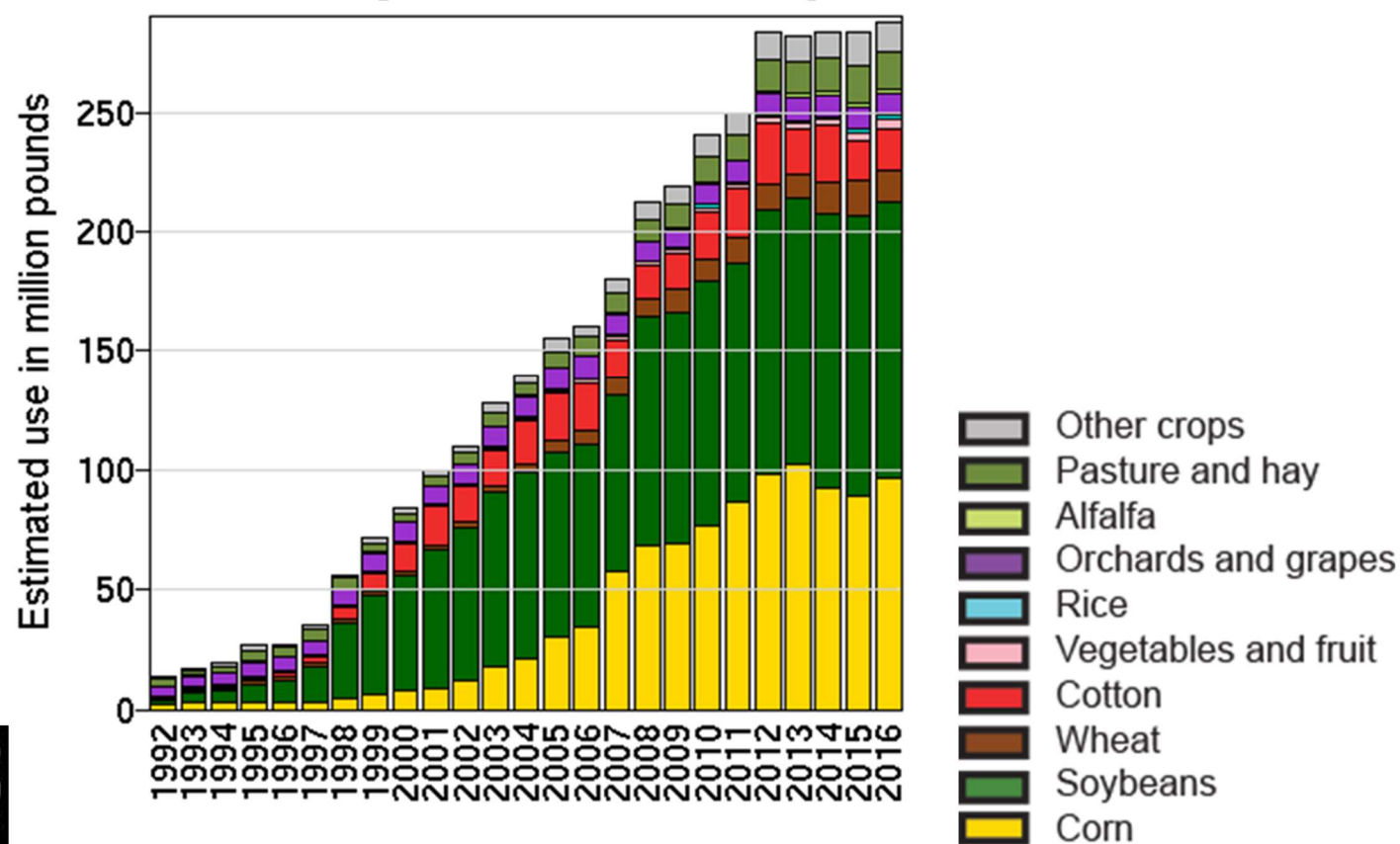
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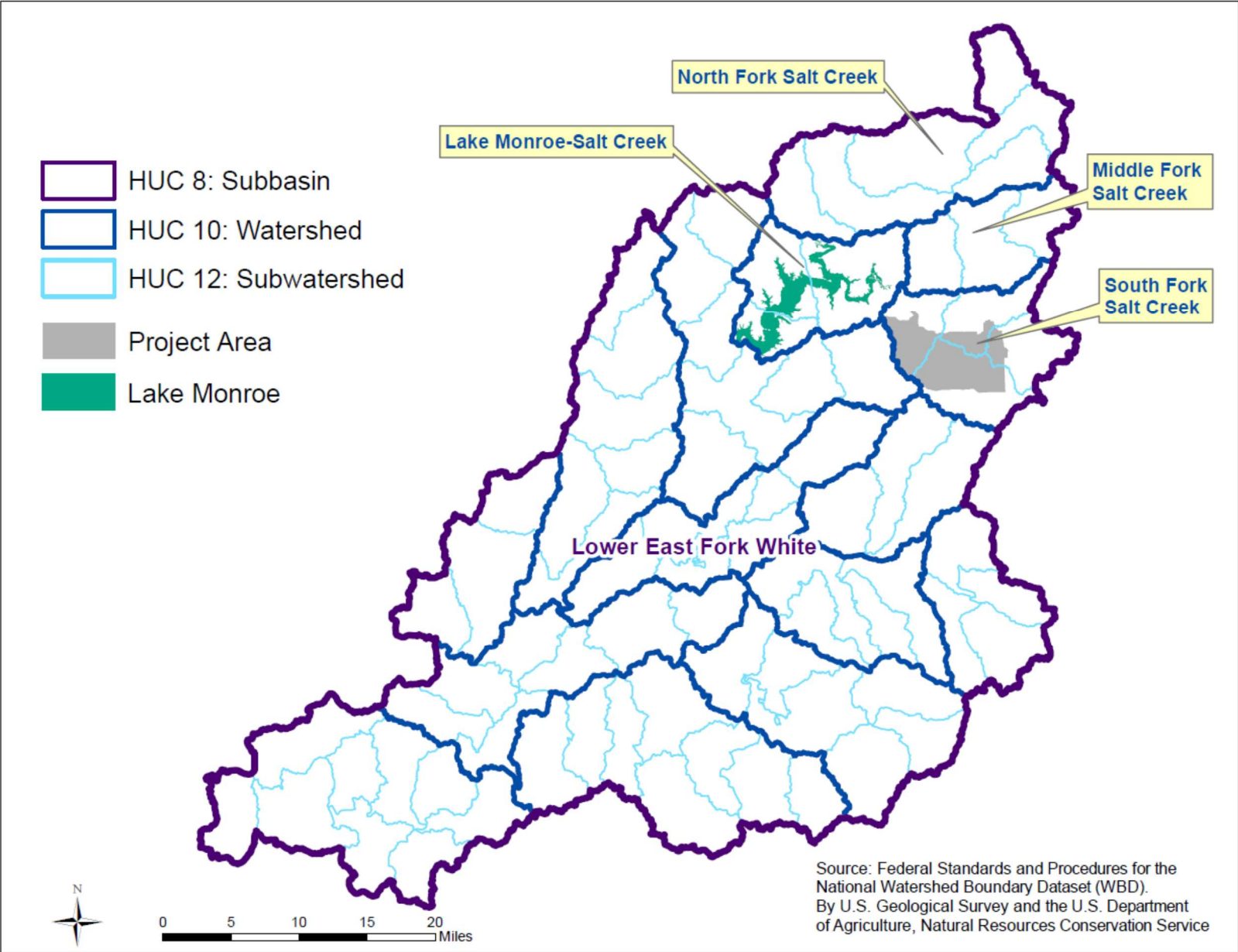
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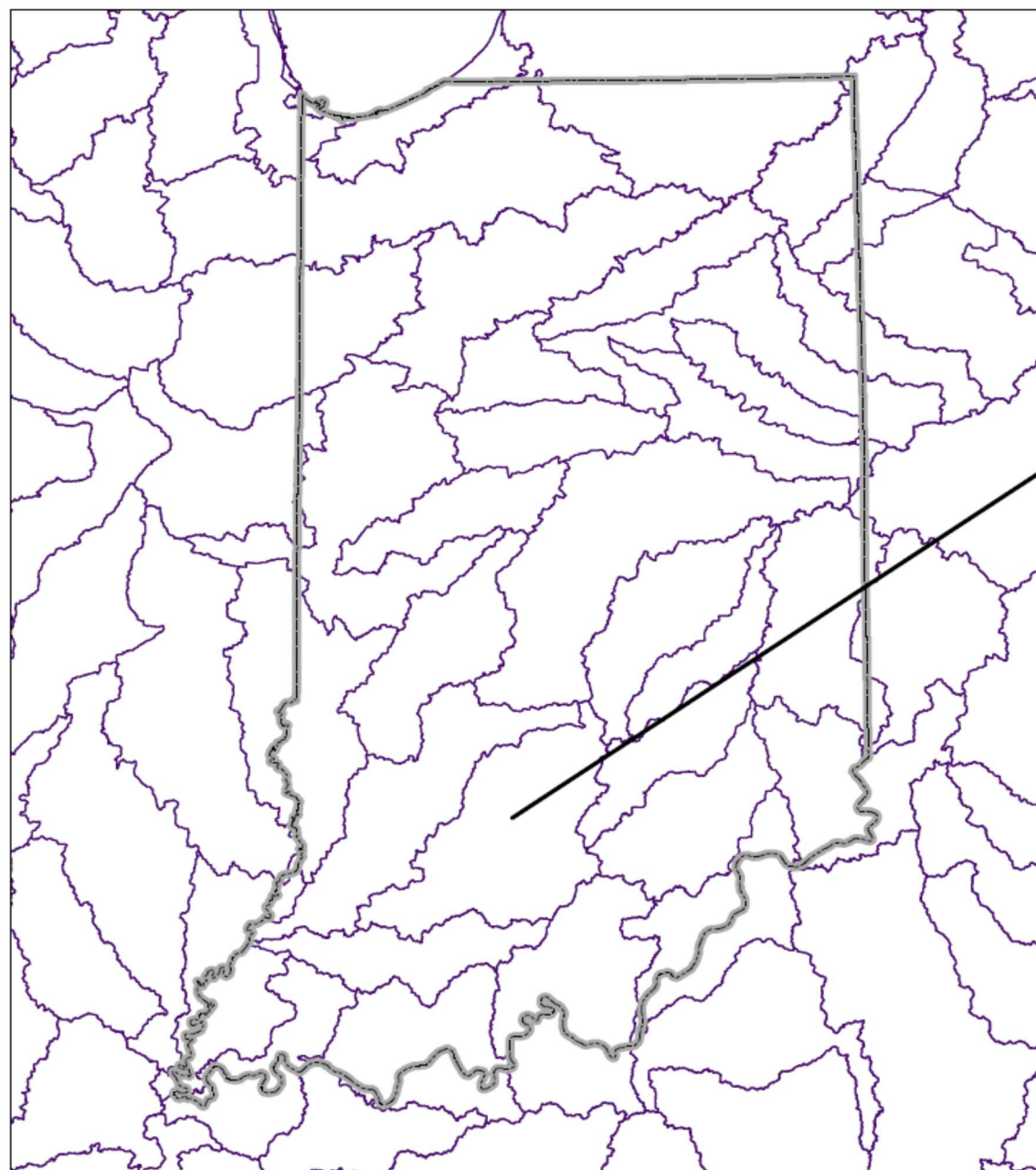
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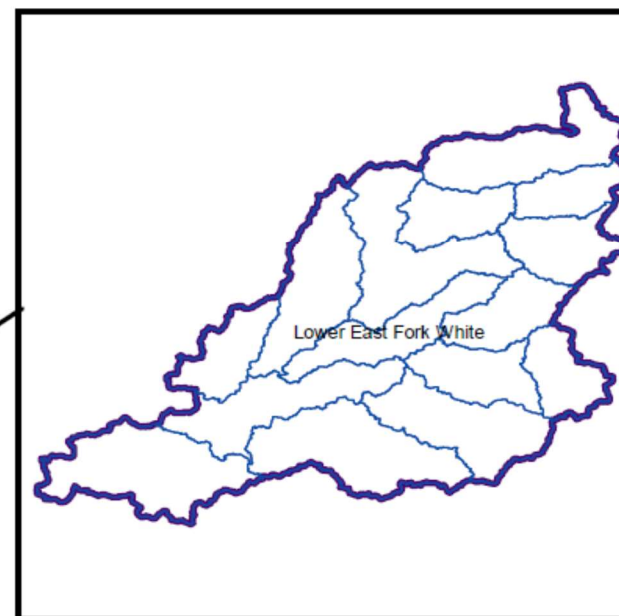
Use by Year and Crop









0 20 40 60 80 Miles



-  HUC 8 Subbasin
-  HUC 10 Watershed



Source: Federal Standards and Procedures for the
National Watershed Boundary Dataset (WBD).
By U.S. Geological Survey and the U.S. Department
of Agriculture, Natural Resources Conservation Service